CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

CENTRAL VALLEY REGION

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ORDER R5-2015-XXXX

WASTE DISCHARGE REQUIREMENTS FOR THE CITY OF GALT CITY OF GALT WASTEWATER TREATMENT PLANT AND RECLAMATION FACILITY SACRAMENTO COUNTY

The following Discharger is subject to waste discharge requirements as set forth in this Order:

Table 1. Discharger Information

Discharger	**City of Galt**
Name of Facility	**City of Galt Wastewater Treatment Plant and Reclamation Facility**
Facility Address	**10059 Twin Cities Road**
	Galt, CA 95632
	Sacramento County

The discharge by the City of Galt from the discharge points identified below is subject to waste discharge requirements as set forth in this Order:

Table 2. Discharge Location

Place Identification	Owner	Township, Range and Section	Assessor's Parcel Nos.
~~Reuse Area~~Land Application Area	City of Galt	T5N, R6E, Section 9	148-0010-053

I, PAMELA C. CREEDON, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on **[DATE]**.

PAMELA C. CREEDON, Executive Officer

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I. FACILITY INFORMATION

The following Discharger is subject to waste discharge requirements as set forth in this Order:

Table 3. Facility Information

Discharger	City of Galt
Name of Facility	City of Galt Wastewater Treatment Plant and Reclamation Facility
Facility Address	10059 Twin Cities Road
	Galt, CA 95632
	Sacramento County
Facility Contact, Title, and Phone	Mark A. Clarkson, Utilities Manager, (209) 366-7260
Mailing Address	495 Industrial Drive, Galt, CA 95632
Type of Facility	Publicly Owned Treatment Works (POTW)
Facility Design Flow	3.0 million gallons per day (MGD)

For the purposes of this Order, references to the "discharger" or "permittee" in applicable state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

II. FINDINGS

The California Regional Water Quality Control Board, Central Valley Region (hereinafter Central Valley Water Board), finds:

A. Legal Authorities. This Order serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). Separate permits have been issued for the surface water and land discharges. This Order regulates the reuse of undisinfected secondary wastewater and the land application of biosolids on the ~~Reuse Area~~land application area. Order R5-2015-XXXX (NPDES No. CA0081434) regulates the wastewater treatment facility and discharges to Laguna Creek.

B. Background and Rationale for Requirements. The Central Valley Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for Order requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through E are also incorporated into this Order.

C. Water Quality Control Plans. The Central Valley Water Board adopted a *Water Quality Control Plan, Fourth Edition (Revised October 2011), for the Sacramento and San Joaquin River Basins* (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Beneficial uses applicable to the underlying groundwater are as follows:

Table 4. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
~~Reuse Area~~Land Application Areas and Effluent Storage Ponds	Underlying Groundwater	Municipal and domestic supply (MUN), agricultural supply and stock watering (AGR), industrial process water supply (PROC), and industrial service supply (IND).

Requirements of this Order implement the Basin Plan.

D. Antidegradation Policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Central Valley Water Board's Basin Plan implements, and incorporates by reference the state antidegradation policy. As discussed in detail in the Fact Sheet the permitted discharge is consistent with State Water Board Resolution No. 68-16.

E. Monitoring and Reporting. CWC section~~s~~ 13267 ~~and 13383~~ authorize~~s~~ the Central Valley Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement State requirements. This Monitoring and Reporting Program is provided in Attachment E.

The technical and monitoring reports in this Order are required in accordance with Water Code section 13267, which states the following in subsection (b)(1), "In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports."

The Discharger owns and operates the Facility subject to this Order. The monitoring reports required by this Order are necessary to determine compliance with this Order. The need for the monitoring reports is discussed in the Fact Sheet.

In accordance with California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain

workplans for investigations and studies, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall bear the professional's signature and stamp.

F. Notification of Interested Parties. The Central Valley Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet of this Order.

G. Consideration of Public Comment. The Central Valley Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet of this Order.

IT IS HEREBY ORDERED that pursuant to Water Code sections 13263 and 13267, the City of Galt, its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the Water Code and regulations adopted thereunder, shall comply with the requirements in this Order.

III. DISCHARGE PROHIBITIONS

A. Discharge of wastewater or biosolids at a location or in a manner different from that described in the Findings is prohibited.

B. Discharge or application of waste classified as 'hazardous', as defined in CCR, Title 23, Section 2521(a), is prohibited.

C. Except as allowed by Order R5-2015-XXXX (NPDES No. CA0081434), the direct discharge of wastes to surface waters or surface water drainage courses is prohibited.

D. Treatment system bypass of untreated or partially treated waste is prohibited, except as allowed by Standard Provision E.2 of the Standard Provisions and Reporting Requirements for Waste Discharge Requirements.

E. Neither the discharge nor its treatment shall create a nuisance as defined in Section 13050 of the California Water Code.

~~E.~~F. The discharge of storm water runoff containing waste pollutants from the recycling of undisinfected secondary domestic wastewater to off-site land or surface water drainage courses is prohibited.

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IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Land Discharge Specifications

The Discharger shall maintain compliance with the following land discharge specifications Loading calculations shall be performed as specified in the attached MRP (Attachment E), Section VIII.B.6.

1. **Hydraulic Loading.** The hydraulic loading to any individual ~~Reuse Area~~land application area (Fields A and B) shall be at reasonable agronomic rates designed to minimize percolation of wastewater constituents below the evaporative and root zone (i.e., deep percolation).

2. **Total Nitrogen.** The total nitrogen loading to any individual land application area ~~Reuse Area~~ (Fields A and B) shall not exceed the agronomic rate for plant available nitrogen (PAN) for the type of crop to be grown, as specified in the most recent edition of the Western Fertilizer Handbook.

3. **Biosolids:**

   a. For biosolids application rates, the Discharger must calculate the PAN using the procedure, volatilization factors, and mineralization rates described in the USEPA's *Guide for [Biosolids] Land Appliers* (EPA/831-B-03-002b).

   b. Application of biosolids at rates in excess of the nitrogen requirements of the vegetation (e.g. PAN) or at rates that would degrade the groundwater is prohibited.

   c. Discharge of biosolids with pollutant concentrations greater than those shown in Table 5 below is prohibited:

Table 5. Biosolids Limitations

Parameter	Ceiling Concentration (mg/kg) [1]
Arsenic	75
Cadmium	85
Copper	4,300
Lead	840
Mercury	57
Nickel	420
Molybdenum	75
Selenium	100
Zinc	7,500

[1] Dry weights.

d. Biosolids shall not be applied in amounts exceeding the adjusted cumulative loading rate ~~(BC) as defined below:~~ CR for each metal as given in Table 6 below:

~~BC=CR-1.8(BS), where:~~

~~BC = Adjusted Cumulative Loading Rate (lbs/ac)~~
~~CR = 40 CFR Part 50. Cumulative Pollutant Loading Rate (lbs/ac)~~
~~BS = Actual Site Background Soil concentration (mg/Kg)~~

~~The values for CR for each metal are given in Table 6 below:~~

Table 6. Cumulative Pollutant Loading Rates

Parameter	kg/hectare	lbs/acre
Arsenic	41	36
Cadmium	39	34
Copper	1,500	1,336
Lead	300	267
Mercury	17	15
Nickel	420	374
Selenium	100	89
Zinc	2,800	2,494

B. Reclamation Specifications

1. Reclaimed water shall be used in compliance with Title 22, Division 4, Chapter 3, Article 3, *Uses of Recycled* Water and this Order.

2. Use of reclaimed water shall be limited to surface irrigation of fodder, fiber, or seed crops. Irrigated crops shall not be used for human consumption (either direct or indirect). Additional reclamation uses may be approved by the Executive Officer.

3. **For Undisinfected Secondary Treated Effluent (**Title 22, Division 4, Chapter 3, Article 1, §60301.900) applied to the agricultural ~~Reuse Area~~land application area**,** the Discharger shall maintain compliance with the Reclamation Discharge effluent limitations specified in Table 7 below, with compliance measured at Monitoring Location EFF-002 as described in the attached MRP (Attachment E).

Table 7. Reclamation Discharge Effluent Limitations

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	30	45
Total Suspended Solids	mg/L	30	45
Settleable Matter	ml/l	0.2	0.5

C. Land Application Area Specifications

1. To the extent practicable, the Discharger shall optimize reclamation and reuse of wastewater to land before discharging to surface water.

2. Public contact with effluent reclaimed water shall be precluded through such means as fences, signs, and other acceptable alternatives. Perimeter warning signs indicating that reclaimed water is in use shall be along the property boundary where public access may occur, and at each access road entrance to the properties. The contents of these signs shall be as described in Section 60310 of Title 22. Each sign shall be in English and Spanish languages.

3. All reclaimed water equipment, pumps, piping, valves, and outlets shall be appropriately marked to differentiate them from potable facilities, and these shall be of a type, or secured in a manner, that permits operation by authorized personnel only.

4. Land discharge of effluent shall comply with the following setback requirements:

Setback Definition[1]	Minimum Irrigation Setback (feet)
Edge of land application area to property boundary	25
Edge of land application area to a public road right of way	30
Edge of land application area to an irrigation well	100
Edge of land application area to a domestic well	150
Edge of land application area to a manmade or natural surface water drainage course [2]	50
Edge of land application area to residence	100
Edge of land application area using spray irrigation to public park, playground, school yard, or similar place of potential public exposure	100

[1] As defined by the wetted area produced during irrigation.
[2] Excluding ditches used exclusively for tailwater return.

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5. Discharges to the irrigation fields shall be managed to minimize erosion and runoff. Discharge of treated wastewater, including runoff, spray or droplets from the irrigation system, shall not occur outside the boundaries of the land application area (Fields A and B).

6. The discharge shall be distributed uniformly on adequate acreage in compliance with Sections IV.A. and IV.B. of this Order.

7. The Discharger may not discharge wastewater to the land application areas during rainfall or when soils are saturated. Wastewater distribution to the land application area shall be optimized to allow saturated fields, either from the last wastewater application or a previous precipitation event, to dry before the next wastewater application.

8. Areas irrigated with effluent reclaimed water shall be managed to prevent breeding of mosquitoes. More specifically:

   a) All applied irrigation water must infiltrate completely within 24 hours.

   b) Ditches not serving as wildlife habitat should be maintained free of emergent, marginal, and floating vegetation.

9. Low-pressure and un-pressurized pipelines and ditches, which are accessible to mosquitoes, shall not be used to store reclaimed water.

V. GROUNDWATER LIMITATIONS

A. Effective immediately, the discharge shall not cause underlying groundwater to contain waste constituents in concentrations statistically greater than the groundwater water quality objectives as specified below in Table 8 or background water quality, whichever is greater.

Table 8. Groundwater Limitations

Constituent	Units	Limitation
Arsenic, Total Recoverable	µg/L	10
~~Total Nitrogen (as N)~~	~~mg/L~~	~~10~~
Nitrate (as N)	mg/L	10
pH	standard units	6.5 to 8.5
Total Coliform Organisms	MPN/100 mL	<2.2
Total Dissolved Solids	mg/L	450

VI. PROVISIONS

A. Standard Provisions

The Discharger shall comply with the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements", dated 1 March 1991, which are attached hereto and made part of this Order by reference. This attachment and its individual paragraphs are commonly referenced as "Standard Provision(s)."

B. Monitoring and Reporting Program (MRP) Requirements

The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E of this Order.

C. Special Provisions

1. Special Studies, Technical Reports and Additional Monitoring Requirements – Not Applicable

2. Construction, Operation and Maintenance Specifications

a. **Effluent Storage Pond Operating Requirements.**

i. Ponds shall be managed to prevent breeding of mosquitoes. In particular,

a) An erosion control program should assure that small coves and irregularities are not created around the perimeter of the water surface.
b) Weeds shall be minimized.
c) Dead algae, vegetation, and debris shall not accumulate on the water surface.

ii. Freeboard shall never be less than 2 feet (measured vertically to the lowest point of overflow).

iii. Objectionable odors originating at this Facility shall not be perceivable beyond the limits of the wastewater treatment and disposal areas.

iv. As a means of discerning compliance with Pond Operating Requirements VI.C.2.a.iii, the dissolved oxygen content in the upper zone (1 foot) of wastewater in the ponds shall not be less than 1.0 mg/L.

v. Ponds shall not have a pH less than 6.5 or greater than 9.0.

3. Special Provisions for Municipal Facilities (POTWs Only)

a. **Sludge/Biosolids Treatment or Discharge Specifications**

Sludge in this document means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. Solid waste refers to grit and screening material generated during preliminary treatment. Residual sludge means sludge that will not be subject to further treatment at the wastewater treatment plant. Biosolids refer to sludge that has been treated and tested and shown to be capable of being beneficially and legally used pursuant to federal and state regulations as a soil amendment for agriculture, silviculture, horticulture, and land reclamation activities as specified under 40 CFR Part 503.

i. Collected screenings, residual sludge, biosolids, and other solids removed from liquid wastes shall be disposed of in a manner approved by the Executive Officer, and consistent with *Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste,* as set forth in Title 27, CCR, Division 2, Subdivision 1, section 20005, et seq. Removal for further treatment, disposal, or reuse at sites (i.e., landfill, composting sites, soil amendment sites) that are operated in accordance with valid waste

discharge requirements issued by a regional water quality control board will satisfy these specifications.

ii. Sludge and solid waste shall be removed from screens, sumps, ponds, clarifiers, etc. as needed to ensure optimal plant performance.

iii. The treatment of sludge generated at the Facility shall be confined to the Facility property and conducted in a manner that precludes infiltration of waste constituents into soils in a mass or concentration that will violate Groundwater Limitations V.A. In addition, the storage of residual sludge, solid waste, and biosolids on Facility property shall be temporary and controlled, and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate Groundwater Limitations V.A.

iv. The use and disposal of biosolids shall comply with existing Federal and State laws and regulations, including permitting requirements and technical standards included in 40 CFR 503. If the State Water Board and the Central Valley Water Board are given the authority to implement regulations contained in 40 CFR 503, this Order may be reopened to incorporate appropriate time schedules and technical standards. The Discharger must comply with the standards and time schedules contained in 40 CFR 503 whether or not they have been incorporated into this Order.

b. **Biosolids Use/Disposal Requirements**

i. The Discharger is encouraged to comply with the "Manual of Good Practice for Agricultural Land Application of Biosolids" developed by the California Water Environment Association.

ii. **Each year by ~~1 February~~19 February,** the Discharger shall submit a biosolids use/ disposal report describing the annual volume of biosolids generated by the plant and specifying the disposal practices.

iii. The Discharger shall comply with the Monitoring and Reporting Program for biosolids contained in Attachment E.

iv. Any proposed change in biosolids use or disposal practice from a previously approved practice shall be reported to the Executive Officer and US EPA Regional Administrator at least **90 days** in advance of the change.

v. Discharge of waste classified as hazardous, as defined in Section 2521(a), of Title 23, CCR, Division 3,Chapter 15, Section 2510, et seq. (hereafter Chapter 15) or 'designated', as defined in Section 13173 of the California Water Code, is prohibited.

vi. Discharge of biosolids to surface waters or surface water drainage course is prohibited.

vii. Discharge of biosolids except as allowed for authorized biosolids storage, staging, and application is prohibited.

viii. Land application of biosolids to any area without adequate runoff control is prohibited.

ix. The storage, transport, or application of biosolids shall not cause a condition of pollution or nuisance as defined by California Water Code, Section 13050.

x. All biosolids shall comply with the applicable pathogen reduction standards listed in 40 CFR 503.32..

xi. All biosolids shall comply with one of the vector attraction reduction requirements specified in 40 CFR 503.33.

xii. If biosolids are applied to a site that tilled, biosolids shall be incorporated into the soil within 24 hours after application. If the vector attraction reduction option defined in 40 CFR 503.33(b)(10)(i) is selected, biosolids must be incorporated in the ground within six hours of application.

xiii. Application of any material that results in a violation of the Safe Drinking Water and Toxic Enforcement Act (Health and Safety Code section 25249.5) is prohibited.

xiv. Application of biosolids to saturated ground or during rainfall events is prohibited.

xv. Application of Class B biosolids exhibiting a moisture content less than 50 percent is prohibited.

xvi. Biosolids with a moisture content less that 75 percent shall not be applied during periods when the surface wind speed exceed 25 miles per hour.

xvii. Objectionable odors originating from the staging, storage, or application of biosolids shall not be perceivable beyond the limits of the property owned or controlled by the Discharger.

xviii. Staging areas and biosolids application shall be at least:

a) 10 feet from property lines;
b) 500 feet from domestic water supply wells;
c) 100 feet from non-domestic water supply wells;
d) 50 feet from public roads and occupied onsite residences;;
e) 100 feet from ordinary high water line of surface waters and natural or man-made drainage courses, including wetlands and vernal pools; and;
f) 500 feet from occupied non-agricultural buildings and off-site residences unless the property owner agrees in writing to a reduced setback distance. In no case shall the setback be less than 100 feet.

xix After application of biosolids distinguished as "Class B" in 40 CFR Part 503, the Discharger shall ensure the following:

a) For at least 30 days, food, feed, and fiber crops are not harvested.

b) For at least 60 days, domestic animals shall not be grazed if average daily (daytime) air temperatures exceed 50ºF.

c) For at least 90 days, domestic animals shall not be grazed if average daily (daytime) air temperatures are less than 50ºF.

d) For at least 12 months:
   i) Public access to the site is restricted for sites with a high potential for public exposure;
   ii) Turf is not harvested if the harvested turf is placed on land with a high potential for contact by public as defined in 40 CFR Part 503.11; and
   iii) Grazing of milking animals used for producing unpasteurized milk for human consumption is prevented if the field is used as pasture.

e) For at least 14 months:
   i) Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface are not harvested.

xx. Each field that receives biosolids shall be planted with a crop such that the crop can reasonably be expected to germinate and grow within eight months of biosolids application.

c. **Biosolids Storage Requirements**

Biosolids shall be considered to be "stored" if they are placed on the ground or in non-mobile containers (i.e., not in a truck or trailer) at the application site or an intermediate storage location away from the generator/processing for more than 48 hours. Biosolids shall be considered to be "staged" if placed on the ground for brief periods solely to facilitate transfer of the biosolids between transportation and application vehicles.

i. Biosolids shall not be stored directly on the ground at any location for more than seven consecutive days.

ii. Biosolids staged or stored on-site for more than 24 hours shall be covered.

iii. Biosolids containing free liquids shall not be placed on the ground prior to application.

iv. Areas used for short-term storage of Class B biosolids shall not be accessible to the public.

v. All staging and storage areas shall be designed, constructed, operated, and maintained to prevent washout or inundation due to floods at return frequency of 100 years.

vi. Biosolids storage facilities shall be designed, maintained, and operated to minimize erosion and leachate generation.

vii. The Discharger shall operate and maintain any biosolids storage areas in accordance with an approved biosolids storage plan.

viii. No waste constituents shall be released or discharged, or placed where it will be released or discharged, in a mass or concentration that causes violation of Groundwater Limitations V.A.

ix. All biosolids shall be transported in covered vehicles capable of containing the designated load.

x. All biosolids capable of generating free liquids shall be transported in leak proof vehicles.

xi. Each biosolids transport driver shall be trained as to the nature of its load and the proper response to accidents or spill events and shall carry a copy of an approved spill response plan.

~~d. **Agricultural Reuse Area Specifications**~~

~~i. To the extent practicable, the Discharger shall optimize reclamation and reuse of wastewater to land before discharging to surface water.~~

~~ii. Public contact with effluent reclaimed water shall be precluded through such means as fences, signs, and other acceptable alternatives. Perimeter warning signs indicating that reclaimed water is in use shall be posted at least every 500 feet along the property boundary where public access may occur, and at each access road entrance to the properties. The contents of these signs shall be as described in Section 60310 of Title 22. Each sign shall be in English and Spanish languages.~~

~~iii. All reclaimed water equipment, pumps, piping, valves, and outlets shall be appropriately marked to differentiate them from potable facilities, and these shall be of a type, or secured in a manner, that permits operation by authorized personnel only.~~

~~iv. Land discharge of effluent shall comply with the following setback requirements:~~

~~Setback Definition[1]~~	~~Minimum Irrigation Setback (feet)~~
~~Edge of land application area to property boundary~~	~~25~~
~~Edge of land application area to a public road right of way~~	~~30~~
~~Edge of land application area to an irrigation well~~	~~100~~

Edge of land application area to a domestic well	150
Edge of land application area to a manmade or natural surface water drainage course [2]	50
Edge of land application area to residence	100
Edge of land application area using spray irrigation to public park, playground, school yard, or similar place of potential public exposure	100

[1] As defined by the wetted area produced during irrigation.
[2] Excluding ditches used exclusively for tailwater return.

v. Discharges to the irrigation fields shall be managed to minimize erosion and runoff. Discharge of treated wastewater, including runoff, spray or droplets from the irrigation system, shall not occur outside the boundaries of the land application area (Fields A and B).

vi. The discharge shall be distributed uniformly on adequate acreage in compliance with Sections IV.A. and IV.B. of this Order.

vii. The Discharger may not discharge wastewater to the land application areas during rainfall or when soils are saturated. Wastewater distribution to the land application area shall be optimized to allow saturated fields, either from the last wastewater application or a previous precipitation event, to dry before the next wastewater application.

viii. **Effective 1 December 2020**, discharge of storm water runoff from the Reuse Area to off-site land or surface water drainage courses is prohibited.

ix.i. **Effective immediately and until 1 December 2020**, there shall be a minimum of 30-days since the last application of wastewater and/or biosolids on the Reuse Area prior to the discharge of storm water runoff from the Reuse Area to off-site land or surface water drainage courses.

x. Areas irrigated with effluent reclaimed water shall be managed to prevent breeding of mosquitoes. More specifically:
a) All applied irrigation water must infiltrate completely within 24 hours.
b) Ditches not serving as wildlife habitat should be maintained free of emergent, marginal, and floating vegetation.

xi. Low-pressure and un-pressurized pipelines and ditches, which are accessible to mosquitoes, shall not be used to store reclaimed water.

4. Other Special Provisions

a. **Change of Ownership.** In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the

existence of this Order by letter, a copy of which shall be immediately forwarded to the Central Valley Water Board.

To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the State of incorporation if a corporation, address and telephone number of the persons responsible for contact with the Central Valley Water Board and a statement. The statement shall comply with the signatory and certification requirements in the Federal Standard Provisions and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer shall be approved or disapproved in writing by the Executive Officer.

b. **Storm Water Runoff of Land Application Area.** This Order includes Discharge Prohibition III.F that prohibits the discharge of storm water runoff containing waste pollutants from the recycling of undisinfected secondary domestic wastewater to off-site land or surface water drainage courses. Because undisinfected secondary effluent is applied to the Land Application Area, this prohibits any discharge of storm water from the Land Application Area due to concerns of pathogens. Winter season storm water is currently collected at the earthen ditches and conveyed to the reservoirs or is discharged to surface water. In order to comply with Discharge Prohibition III.F it will be necessary for the Discharger to construct additional storage facilities that will enable the Facility to contain the appropriate volume of water that a large winter storm is capable of producing. The Discharger has requested to first conduct a pathogen risk study to determine if there may be best management practices that could be implemented to ensure the discharge of storm water run-off from the Land Application Area does not contain waste pollutants.

This Order allows the Discharger until **1 January 2025** to comply with Discharge Prohibition III.F. The Discharger shall comply with the following:

i. **Interim Discharge Specification**. To minimize impacts to surface water there shall be a minimum of 30-days since the last application of wastewater and/or biosolids on the Land Application Area prior to the discharge of storm water runoff from the Land Application Area to off-site land or surface water drainage courses.

ii. **Pathogen Risk Study.** The Discharger shall conduct a Pathogen Risk Study to 1) characterize the potential human health risks associated with potential exposure to pathogens in stormwater runoff from pasture land irrigated with “undisinfected secondary” effluent, and 2) define and evaluate appropriate control strategies (best management practices) for minimizing, to the extent practicable, pathogenic organisms from migrating off the Land Application Area site with stormwater runoff. The Pathogen Risk Study can either be an individual study or group study with other

dischargers and interested parties. The Pathogen Risk Study must comply with the following schedule:

Task	Compliance Date
Submit Work Plan	1 July 2017
Begin Study	1 October 2017
Complete Study	1 October 2019
Submit Study Reports	1 April 2020

iii. **Implementation.** The Discharger shall comply with the following schedule to implement best management practices identified in the Pathogen Risk Study to comply with Discharge Prohibition III.F.

Task	Compliance Date
Submit Work Plan	1 October 2020
Complete Construction	1 October 2024
Progress Reports	1 October, annually beginning 1 October 2021
Final Compliance	1 January 2025

ATTACHMENT A – DEFINITIONS

Arithmetic Mean (μ), also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean = $\mu = \Sigma x / n$ where: Σx is the sum of the measured ambient water concentrations, and n is the number of samples.

Average Monthly Effluent Limitation (AMEL): the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

~~**Average Weekly Effluent Limitation (AWEL):** the highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.~~

Best Practicable Treatment or Control (BPTC): BPTC is a requirement of State Water Resources Control Board Resolution 68-16 – "Statement of Policy with Respect to Maintaining High Quality of Waters in California" (referred to as the "Antidegradation Policy"). BPTC is the treatment or control of a discharge necessary to assure that, *"(a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained."* Pollution is defined in CWC Section 13050(l). In general, an exceedance of a water quality objective in the Basin Plan constitutes "pollution".

~~**Coefficient of Variation (*CV*)** is a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.~~

Daily Discharge: Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ) are those sample results less than the RL, but greater than or equal to the laboratory's MDL.

Estimated Chemical Concentration is the estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

~~**Instantaneous Maximum Effluent Limitation:** the highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).~~

~~**Instantaneous Minimum Effluent Limitation:** the lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).~~

Maximum Daily Effluent Limitation (MDEL) means the highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Median is the middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (*n*) is odd, then the median = $X_{(n+1)/2}$. If *n* is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the *n*/2 and *n*/2+1).

Method Detection Limit (MDL) is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in title 40 of the Code of Federal Regulations, Part 136, Attachment B, revised as of July 3, 1999.

~~**Minimum** **Reporting** **Level (ML**~~**RL)** is the concentration (and it's associated analytical method) at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ~~ML~~ RL is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Not Detected (ND) are those sample results less than the laboratory's MDL.

~~**Persistent** pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.~~

~~**Pollution Prevention** means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to~~

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~~another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State or Central Valley Water Board.~~

~~**Reporting Level (RL)** is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Central Valley Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.~~

~~**Satellite Collection System** is the portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility that a sanitary sewer system is tributary to.~~

Source of Drinking Water is any water designated as municipal or domestic supply (MUN) in a Central Valley Water Board Basin Plan.

Standard Deviation (σ) is a measure of variability that is calculated as follows:

$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

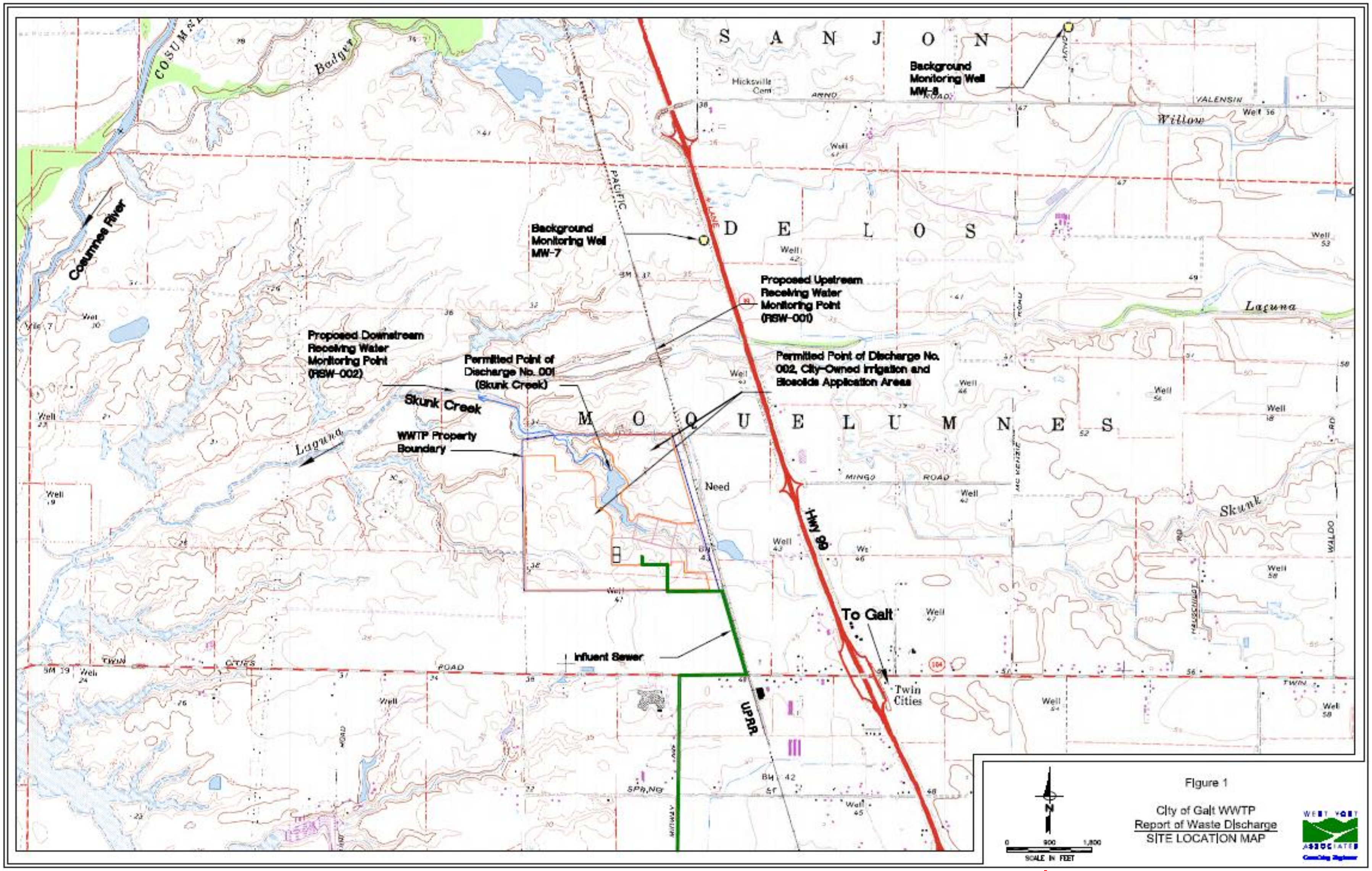
where:

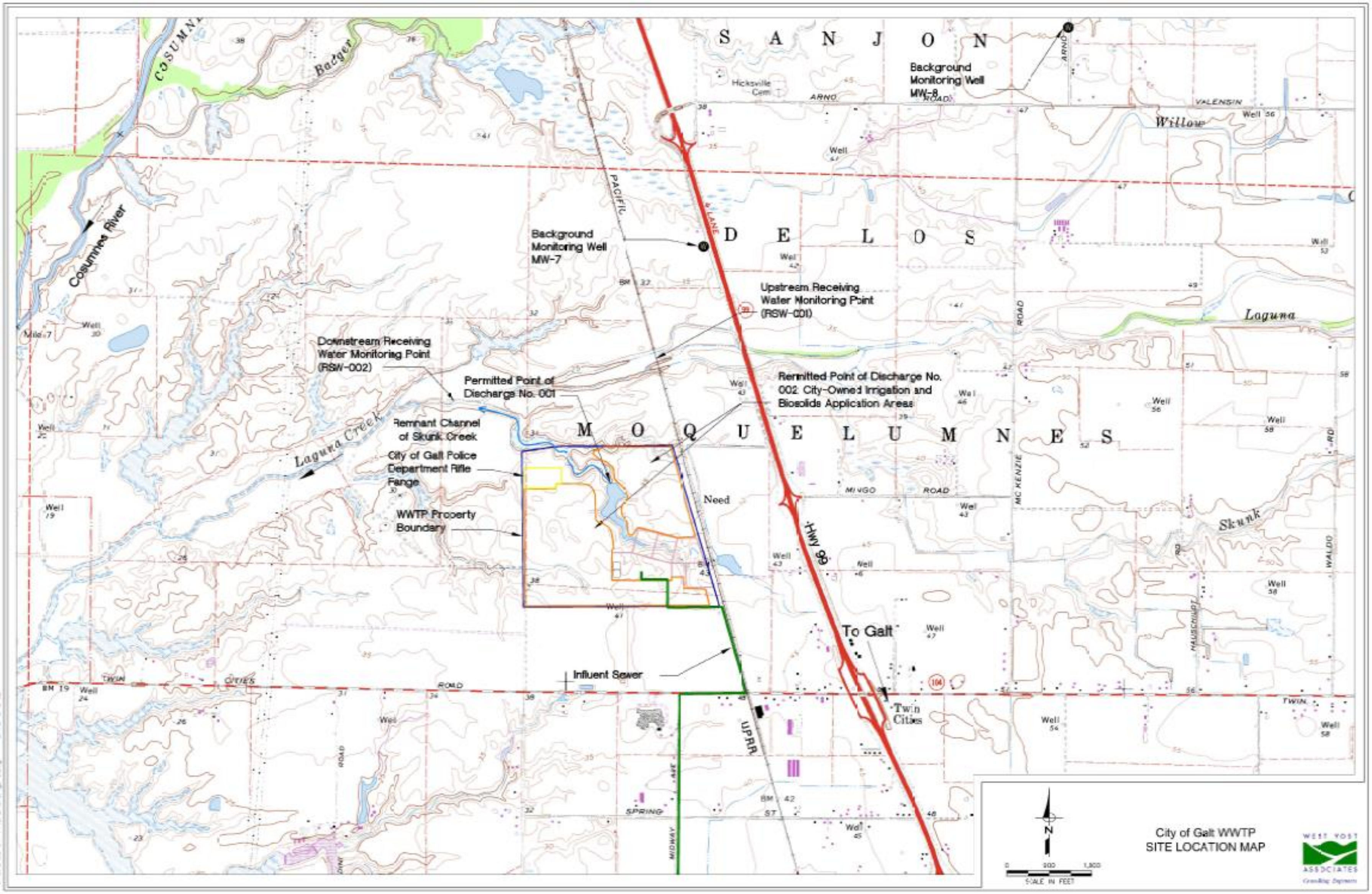
x is the observed value;

μ is the arithmetic mean of the observed values; and

n is the number of samples.

ATTACHMENT B – MAP


Background Monitoring Well MW-8
Background Monitoring Well MW-7
Proposed Upstream Receiving Water Monitoring Point (RSW-001)
Proposed Downstream Receiving Water Monitoring Point (RSW-002)
Permitted Point of Discharge No. 001 (Skunk Creek)
Permitted Point of Discharge No. 002, City-Owned Irrigation and Biosolids Application Areas
Skunk Creek
WWTP Property Boundary
Cosumnes River
Hwy 99
To Galt
Influent Sewer
UPRR
Twin Cities
Figure 1
City of Galt WWTP
Report of Waste Discharge
SITE LOCATION MAP
SCALE IN FEET


Background Monitoring Well MW-8
Background Monitoring Well MW-7
Upstream Receiving Water Monitoring Point (RSW-001)
Downstream Receiving Water Monitoring Point (RSW-002)
Permitted Point of Discharge No. 001
Permitted Point of Discharge No. 002: City-Owned Irrigation and Biosolids Application Areas
Remnant Channel of Skunk Creek
City of Galt Police Department Rifle Range
WWTP Property Boundary
Influent Sewer
To Galt
Hwy 99
Cosumnes River
Laguna Creek
City of Galt WWTP
SITE LOCATION MAP

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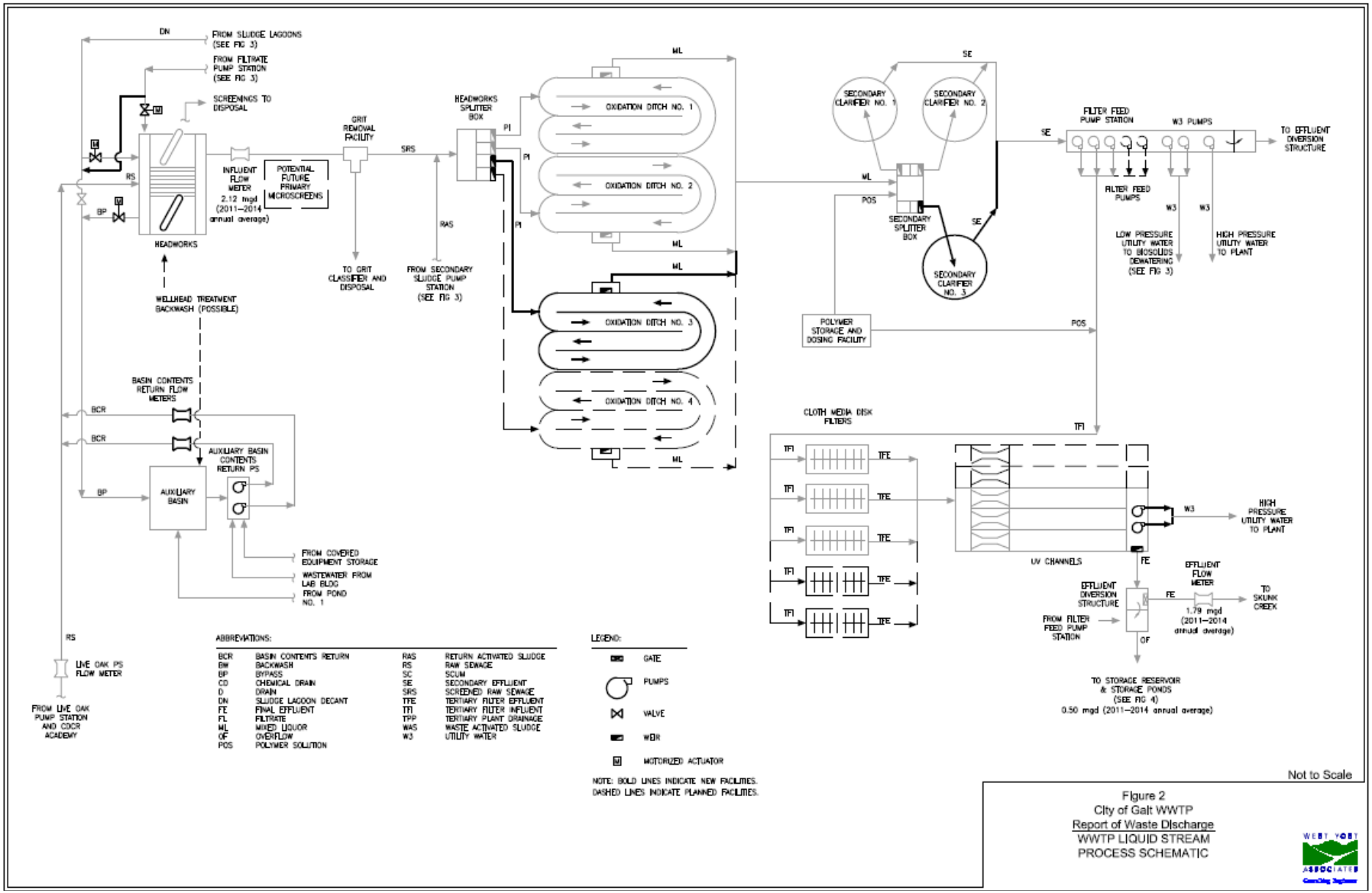
ATTACHMENT C – FLOW SCHEMATIC



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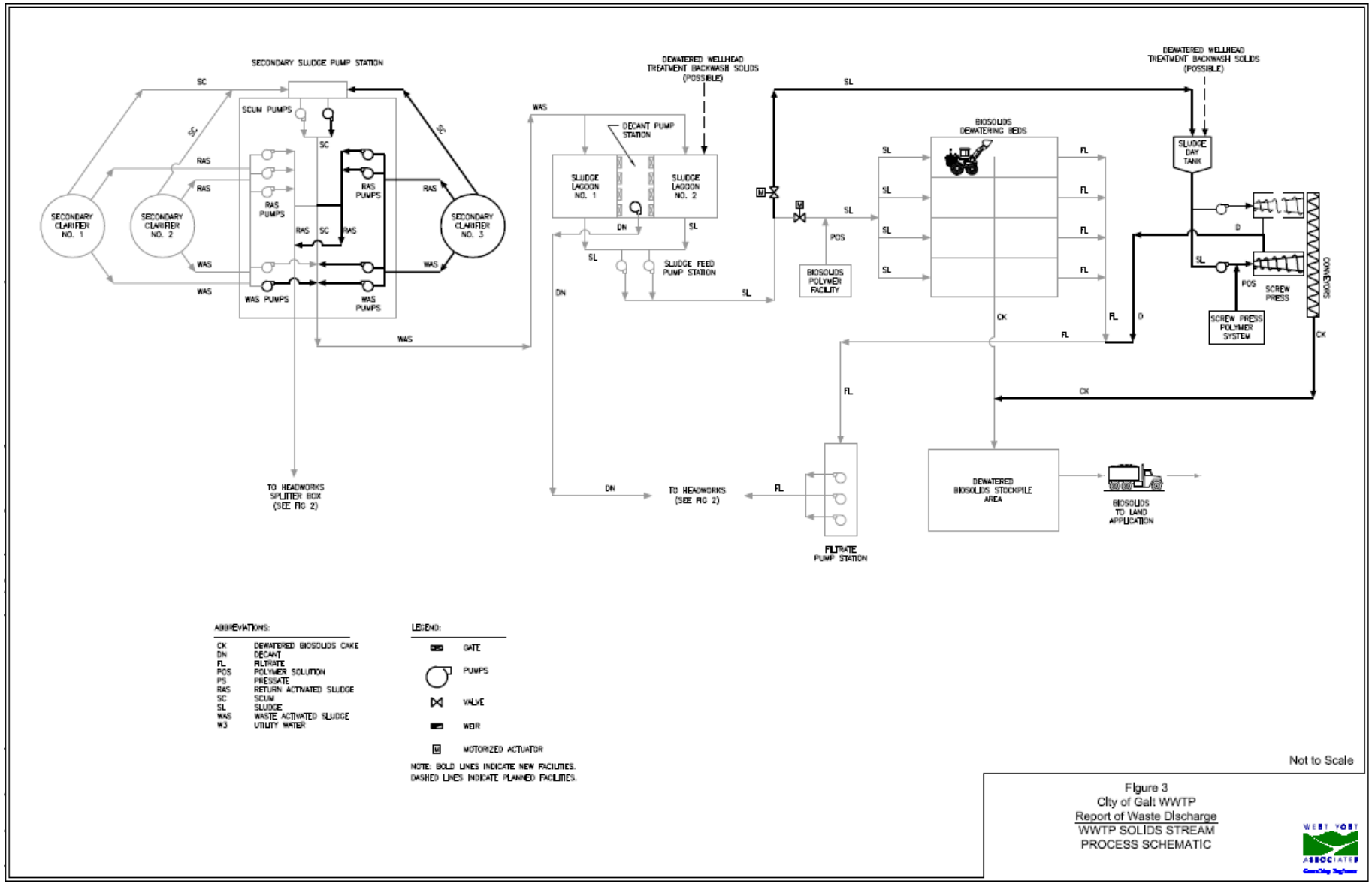

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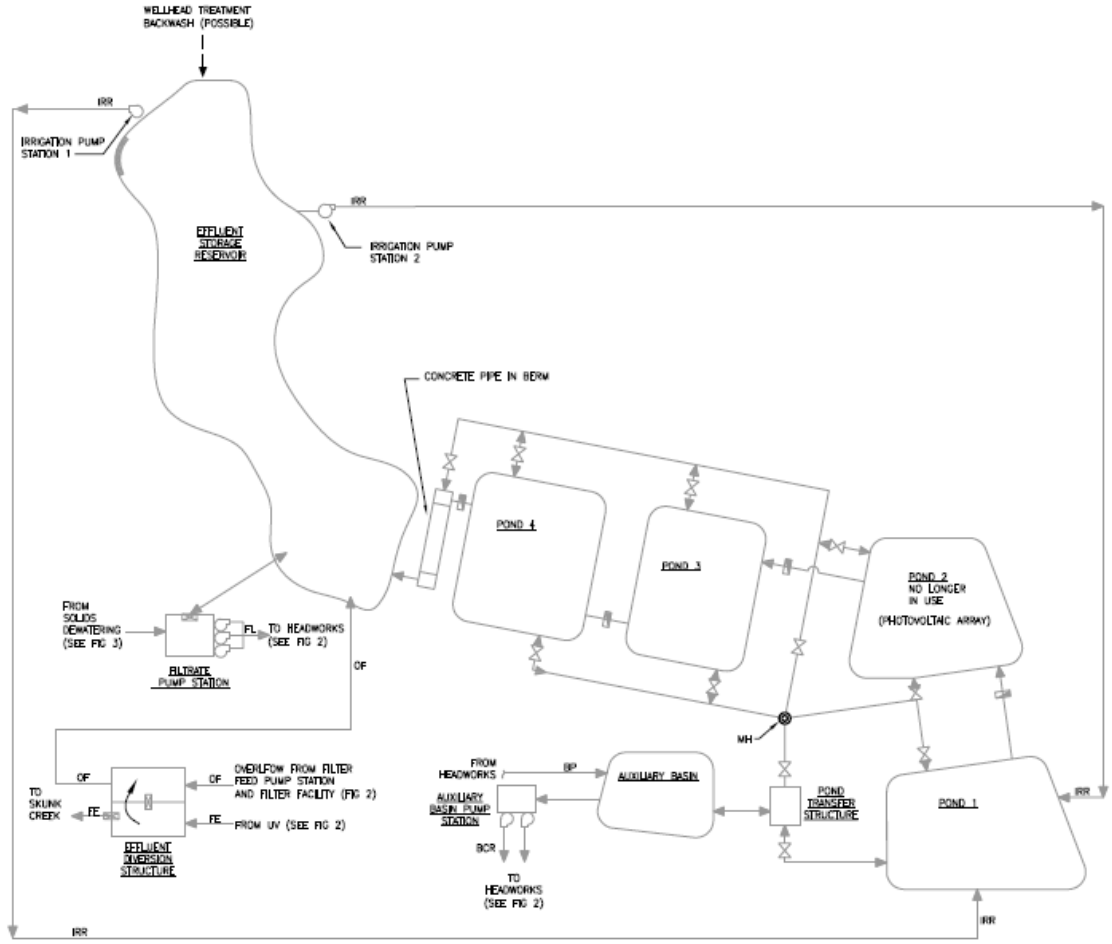

Figure 4
City of Galt WWTP
Report of Waste Discharge
WWTP POND SCHEMATIC

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ATTACHMENT D –STANDARD PROVISIONS

The Discharger shall comply with the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements", dated 1 March 1991. The document may be found on the Central Valley Water Board website at the following link:

http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/std_provisions/wdr-mar1991.pdf

Copies of the document may also be obtained by contacting or visiting the Central Valley Water Board's office at 11020 Sun Center Drive, Suite 200, Rancho Cordova, California 95670, weekdays between 8:00 a.m. and 5:00 p.m.

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

Water Code Section~~s~~ 13267 ~~and 13383~~ also authorize~~s~~ the Regional Water Quality Control Board (Central Valley Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and state regulations.

I. GENERAL MONITORING PROVISIONS

A. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and the approval of the Central Valley Water Board.

B. Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. In the event a certified laboratory is not available to the Discharger, analyses performed by a noncertified laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program must be kept in the laboratory and shall be available for inspection by Central Valley Water Board staff. The Quality Assurance-Quality Control Program must conform to USEPA guidelines or to procedures approved by the Central Valley Water Board.

C. All analyses shall be performed in a laboratory certified to perform such analyses by the State Water Resources Control Board (State Water Board), Division of Drinking Water. Laboratories that perform sample analyses shall be identified in all monitoring reports.

D. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.

E. Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this Monitoring and Reporting Program.

II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	MW-001	Located at the southwest corner of the auxiliary basin.
--	MW-002	Located at the southwest corner of the sludge lagoons.
--	MW-003	Located along roadway on western edge of Section 5 in the land application area~~Reuse Area~~.
--	MW-004R	Located at the southwest edge of Section 18 in the northern ~~Reuse Area~~ land application area.
--	MW-005	Located east of the Facility adjacent to Highway 99.
--	MW-007	Approximately 1.5 miles north of the Facility site, on the frontage road west of State Highway 99.
--	MW-008	Approximately 3.0 miles north of the Facility site on Arno Road.
002	EFF-002	Location where a representative sample of the Facility effluent being discharged to land can be obtained.
--	REC-001	Location where a representative sample of the treated wastewater being applied to the ~~Reuse Area~~ land application area can be obtained.
--	BIO-001	Location where a representative sample of the biosolids applied to the ~~Reuse Area~~ land application area can be obtained.
--	PND-001,PND-003, PND-004, and RES-001	At a point in each pond and in the Effluent Storage Reservoir, at which all waste tributary to the pond or reservoir is present and representative.

III. INFLUENT MONITORING REQUIREMENTS – NOT APPLICABLE

IV. LAND DISCHARGE REQUIREMENTS

A. Monitoring Locations EFF-002

1. The Discharger shall monitor the effluent leaving the Facility prior to being introduced into the Effluent Storage Reservoir. Results shall be included in the monthly monitoring report. Sampling is not required during periods when no wastewater is discharged to the Effluent Storage Reservoir; in such cases, the monitoring report shall clearly state that there was no discharge to the Effluent Storage Reservoir. Monitoring shall include the following:

Table E-2. Effluent Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	Grab	1/week	[1]
Total Suspended Solids	mg/L	Grab	1/week	[1]
Settleable Matter	ml/l	Grab	1/week	[1]

1. Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136.~~; for priority pollutants the methods must meet the lowest MLs specified in Appendix 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by the Central Valley Water Board or the State Water Board.~~

B. Monitoring Locations PND-001, PND-003, PND-004, and RES-001

1. At a minimum, the Discharger shall monitor wastewater impounded in each Facility pond(s) at PND-001, PND-003, and PND-004, and the Storage Reservoir at RES-001 as required in Table E-2, below. Samples shall be collected from each pond during the specified sampling frequency. Pond monitoring is not required when the Effluent Storage Reservoir is being used to hold partially treated flows for emergency purposes; however the monitoring reports shall indicate this.

Table E-3. Pond Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Freeboard	Feet[1] (±0.1)	Grab	1/Month	--
Dissolved Oxygen	mg/L	Grab	1/Month	[2]
Odors	--	Observation	1/Month	--
Levee Condition	--	Observation	1/Month	--

[1] To be measured vertically to the lowest point of overflow.
[2] Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136. A hand-held field meter may be used, provided the meter utilizes a USEPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the Facility.

V. RECLAMATION MONITORING REQUIREMENTS

A. Monitoring Locations REC-001

1. The Discharger shall monitor the wastewaters applied to the agricultural ~~reuse area~~ land application area ~~(Reuse Area)~~ at REC-001, and the results shall be included in the monthly monitoring report. Sampling is not required during periods when no wastewater~~, or biosolids, are~~ is discharged to the land application area~~Reuse Area~~; in such cases, the monitoring report shall clearly state that there was no discharge to the land application area~~Reuse Area~~. Monitoring shall include the following:

Table E-4. Reclamation Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency[5]	Required Analytical Test Method
Flow[1, 2]	gallons	Calculated	1/Day	--
Rainfall	inches	Measurement	1/Day	--
Acreage Applied[1, 2]	acres	Calculated	1/Day	--
Application Rate[1, 2]	in/day	Calculated	1/Day	--
Total Nitrogen (as N)[2,3]	mg/L & lbs/acre.month	Grab & Calculated	1/week/event[5]	[4]
Ammonia, Total (as N) [1,2]	mg/L	Grab	1/week/event[5]	[4]
Electrical Conductivity[1,2]	µmhos/cm	Grab	1/week/event[5]	[4]

[1] For each land application area (Fields A and B). Flows shall be reported as cumulative daily flows and calculated based on pump curves and run times, unless an alternative method is proposed and approved by the Executive Officer.
[2] Land application areas shall be identified.
[3] For each land application area (Zones 21 ~~1~~ – ~~19~~18).
[4] Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136~~; for priority pollutants the methods must meet the lowest MLs specified in Appendix 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by the Central Valley Water Board or the State Water Board~~.
[5] The minimum required sampling frequency is once per event. The maximum required sampling frequency is once per sampling period (i.e. week or month). For example, once per week (1/week) is the maximum amount of sampling required for the sampling frequency '*1/week/event*' regardless of the number of events that occur during that week (A week is from Sunday through Saturday).

B. The Agricultural Field Inspections

1. The Discharger shall inspect the land application areas at least weekly during irrigation events, and observations from those inspections shall be documented for inclusion in the monthly self-monitoring reports. The following items shall be documented for each field to be irrigated on that day.

a. Evidence of erosion;
a. Evidence of berm damage or erosion;
b. Evidence of damage to standpipes and flow control valve (if applicable);
c. Evidence of improper use of valves;
d. Condition of head ditch;
e. Soil saturation;
f. Ponding;
g. Evidence of damage to tailwater ditches and evidence of potential and actual runoff to off-site areas;
h. Evidence of potential and actual discharge to surface water;
i. Accumulation of organic solids in ditches and at soil surface;
j. Soil clogging;
k. Odors that have the potential to be objectionable at or beyond the property boundary; and
l. Evidence of fly and/or mosquito breeding.
m. Temperature, wind direction and relative strength; and other relevant field conditions shall also be observed and recorded. The notations shall also

document any corrective actions taken based on observations made, including fresh water flushing of the force main and head ditches. A copy of entries made in the log during each month shall be submitted as part of the monthly self-monitoring report.

VI. RECEIVING WATER MONITORING REQUIREMENTS –GROUNDWATER

A. Groundwater Monitoring Locations

1. **Monitoring Locations** MW-001, MW-002, MW-003, MW-004R, MW-005, MW-007, and MW-008

a. Prior to construction and/or sampling of any groundwater monitoring wells, the Discharger shall submit plans and specifications to the Central Valley Water Board for Executive Officer's approval. Once installed, all new wells shall be added to the monitoring network (which currently consists of groundwater monitoring wells MW-001, MW-002, MW-003, MW-004R, MW-005, MW-007, and MW-008), and shall be sampled and analyzed according to the schedule below. Water table elevations shall be calculated to determine groundwater gradient and direction of flow.

Prior to sampling, the groundwater elevations shall be measured and the wells shall be purged of at least three well volumes until, temperature, pH, and electrical conductivity have stabilized. Depth to groundwater shall be measured to the nearest 0.01 feet. Samples shall be collected and analyzed using standard USEPA methods. Groundwater monitoring shall include, at minimum the following:

Table E-5. Groundwater Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Depth to groundwater[1]	0.01 feet	Measurement	2/Year	--
Groundwater elevation[1]	0.01 feet	Calculated	2/Year	--
Gradient magnitude	feet/feet	Calculated	2/Year	--
Gradient direction	degrees	Calculated	2/Year	--
pH[2]	standard units	Grab	2/Year	[3]
Total Dissolved Solids	mg/L	Grab	2/Year	[3]
Electrical Conductivity @ 25°C	µmhos/cm	Grab	2/Year	[3]
Sodium	mg/L	Grab	2/Year	[3]
Total Kjeldahl Nitrogen (as N)	mg/L	Grab	2/Year	[3]
Nitrate as Nitrogen	mg/L	Grab	2/Year	[3]
Total Coliform Organisms	MPN/100 mL	Grab	2/Year	[3]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method

[1] Groundwater elevation shall be determined based on depth-to-water measurements using a surveyed measuring point elevation on the well and a surveyed reference elevation. Elevations shall be measured to the nearest one-hundredth of a foot from mean sea level.

[2] A hand-held field meter may be used, provided the meter utilizes a USEPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the WWTP.

[3] Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136.~~; for priority pollutants the methods must meet the lowest MLs specified in Appendix 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by the Central Valley Water Board or the State Water Board.~~

b. Results of monitoring shall be reported in compliance with the Reporting Section VIII.B.6.i of this Monitoring and Reporting Program. The groundwater monitoring report shall include a statement concerning compliance with groundwater limitations.

VII. OTHER MONITORING REQUIREMENTS

A. Biosolids

1. Monitoring Location BIO-001

a. Sampling records shall be retained for a minimum of **5 years**. A log shall be kept of sludge quantities generated and of handling and disposal activities. The log should be complete enough to serve as a basis for part of the annual report.

Table E-6. Biosolids Monitoring Requirements

Parameter	Units	Sample Type[1]	Minimum Sampling Frequency	Required Analytical Test Method
Quantity	dry tons	--	1/application	--
Solids Content	percentage	--	1/application	--
Disposal Location	--	--	1/application	--
Arsenic	mg/kg	Composite	1/application	
Cadmium	mg/kg	Composite	1/application	
Copper	mg/kg	Composite	1/application	
Lead	mg/kg	Composite	1/application	
Mercury	mg/kg	Composite	1/application	
Molybdenum	mg/kg	Composite	1/application	
Nickel	mg/kg	Composite	1/application	
Selenium	mg/kg	Composite	1/application	
Zinc	mg/kg	Composite	1/application	
Total Nitrogen	mg/kg (dry)	Composite	1/application	
Ammonia nitrogen	mg/kg (dry)	Composite	1/application	
Nitrate nitrogen	mg/kg (dry)	Composite	1/application	
Total phosphorus	mg/kg (dry)	Composite	1/application	
Total potassium	mg/kg (dry)	Composite	1/application	

Parameter	Units	Sample Type[1]	Minimum Sampling Frequency	Required Analytical Test Method

1. A composite sample of biosolids shall be collected from each drying bed by dividing each bed into quarters and grabbing equal amounts of sample from the center of each quarter and then combining the grab samples, ~~hourly during the hours of biosolids wasting over a 24-hour period and~~ in accordance with U.S. EPA's POTW Biosolids Sampling and Analysis Guidance Document, August 1989, (or most recent edition).

b. Results of monitoring shall be reported in compliance with the Reporting Section VIII.B.6. and VIII.D.1 of this Monitoring and Reporting Program. The biosolids monitoring report shall include a statement concerning compliance with biosolids use/disposal restrictions.

VIII. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

2. Upon written request of the Central Valley Water Board, the Discharger shall submit a summary monitoring report. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year(s).

3. The Discharger shall report to the Central Valley Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act of 1986.

4. **Reporting Protocols.** The Discharger shall report with each sample result the applicable Reporting Level (RL) and the current Method Detection Limit (MDL), as determined by the procedure in Part 136.

   The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

   a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

   b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

      For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (± a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

d. Dischargers are to instruct laboratories to establish calibration standards so that the ~~ML~~ RL value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from *extrapolation* beyond the lowest point of the calibration curve.

5. **Multiple Sample Data.** When determining compliance with an AMEL ~~, AWEL,~~ or MDEL ~~for priority pollutants~~ and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

   a. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

   b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

B. Self-Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Central Valley Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). Until such notification is given, the Discharger shall submit hard copy SMRs. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

2. Monitoring results shall be submitted to the Central Valley Water Board by the **first day** of the second month following sample collection. Quarterly and annual monitoring results shall be submitted by the **first day of the second month following each calendar quarter, semi-annual period, and year**, respectively.

3. In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner to illustrate clearly whether the discharge complies with waste discharge requirements (e.g., effluent limitations and discharge specifications, receiving water limitations, special provisions, etc.). The highest daily maximum for the month and monthly ~~and weekly~~

averages shall be determined and recorded as needed to demonstrate compliance. ~~In addition, the following shall be calculated and reported in the SMRs:~~

4. Unless otherwise specified, all constituents monitored on a continuous basis (metered), shall be reported as daily maximums, daily minimums, and daily averages; flow shall be reported as the total volume discharged per day for each day of discharge.

5. If the Discharger monitors any pollutant at the locations designated herein more frequently than is required by this Order, the results of such monitoring shall be included in the calculation and reporting of the values required in the discharge monitoring report form. Such increased frequency shall be indicated on the discharge monitoring report form.

6. For reporting the land discharge specifications and applicable limitations of this Order, at a minimum, the self-monitoring report shall be submitted monthly, and the report shall include:

   a. The required monitoring results in this MRP for the ponds and Storage Reservoir (Section IV), all land application area monitoring (Section V), and groundwater (Section VI). Data shall be presented in tabular format.

   b. Daily precipitation data in tabular form accompanied by starting and ending dates of irrigation for each field.

   c. Weekly field inspection reports, during periods when land application operations are conducted, including records of the date and time.

   d. A comparison of monitoring data to the discharge specifications and applicable limitations and an explanation of any violation of those requirements.

   e. Daily discharge volumes and acres irrigated shall be tabulated. The report shall include discharge volumes and irrigation practices used (water source, method of application, application period/duration, drying times, etc.) for each field or group of fields utilized during the month. Hydraulic loading rates (inches/~~acre/month~~day) shall be calculated.

   f. **Total Nitrogen loading rate**. The Total Nitrogen loading rate shall be calculated for each irrigation field and/or zone (as shown in Attachment ~~C~~B-2) on a monthly basis using the daily applied volume of wastewater, the most recent effluent monitoring results, and the daily application area. Loading rates for supplemental nitrogen (e.g. fertilizers and biosolids), when applicable, shall be calculated and included in the total nitrogen loading rate for each irrigation ~~field~~ zone on a monthly basis using the actual daily applied load and the estimated daily application area. The cumulative nitrogen loading rate for each irrigation field and/or zone for the calendar year to date shall be calculated as a running total of monthly loadings to date from all sources.

g. **Groundwater Monitoring Reports.** As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all Groundwater Monitoring Reports shall be prepared under the direct supervision of a Registered Engineer or Professional Geologist and signed by the registered professional.

The Discharger shall establish a ~~quarterly~~ semi-annual sampling schedule for groundwater monitoring such that samples are obtained approximately every ~~three~~ six months. ~~Quarterly~~ Semi-annual monitoring reports shall be submitted to the Board ~~by the **1st day of the second month after the quarter** (i.e. the January-March quarterly report is due by May 1st)~~in accordance with the Reporting Schedule in Table E-7 and shall include the following:

i) Results of groundwater monitoring;

ii) A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the groundwater monitoring. The narrative shall be sufficiently detailed to verify compliance with the WDR, this MRP, and the Standard Provisions and Reporting Requirements. The narrative shall be supported by field logs for each well documenting depth to groundwater; parameters measured before, during, and after purging; method of purging; calculation of casing volume; and total volume of water purged;

iii) Calculation of groundwater elevations, an assessment of groundwater flow direction and gradient on the date of measurement, comparison of previous flow direction and gradient data, and discussion of seasonal trends if any;

iv) ~~A narrative discussion of the analytical results for all groundwater locations monitored including spatial and temporal tends, with reference to summary data tables, graphs, and appended analytical reports (as applicable);~~

~~v) A comparison of monitoring data to the groundwater limitations and an explanation of any violation of those requirements;~~

~~vi)~~ Summary data tables of historical and current water table elevations and analytical results;

v~~ii~~) A scaled map showing relevant structures and features of the facility, the locations of monitoring wells and any other sampling stations, and groundwater elevation contours referenced to mean sea level datum; and

vi~~ii~~) Copies of laboratory analytical report(s) for groundwater monitoring.

7. A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain the penalty of perjury statement by the Discharger, or the Discharger's authorized agent, as described in the Standard Provisions.

8. SMRs must be submitted to the Central Valley Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

Regional Water Quality Control Board
WDR Compliance and Enforcement Unit
Central Valley Region
11020 Sun Center Dr., Suite #200
Rancho Cordova, CA 95670-6114

9. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-7. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	First day of the calendar month following the permit effective date or on permit effective date if that date is first day of the month	All	Submit with monthly SMR
1/Day	First day of the calendar month following the permit effective date or on permit effective date if that date is first day of the month	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	First day of second calendar month following month of sampling
1/Week	First Sunday of the calendar month following the permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	First day of second calendar month following month of sampling
1/Month	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	First day of calendar month through last day of calendar month	First day of second calendar month following month of sampling
1/Quarter	Closest of 1 January, 1 April, 1 July, or 1 October following permit effective date	1 January through 31 March 1 April through 30 June 1 July through 30 September 1 October through 31 December	1 May 1 August 1 November 1 February
2/Year	Closest of 1 January or 1 July following permit effective date	1 January through 30 June 1 July through 31 December	30 days from the end of the monitoring period
1/Year	1 January following permit effective date	1 January through 31 December	1 February

C. Other Reports

1. **Annual Report.** An Annual Report shall be prepared and shall include all annual monitoring data required in the monitoring schedule applicable to land applications, including pond and groundwater monitoring. The Annual Report shall be submitted to the Central Valley Water Board by **1 February** each year. In addition to the data normally presented, the Annual Report shall include the following:

a. Tabular and graphical summaries of historical monthly total loading rates for water (hydraulic loading in inches) and total nitrogen.

b. A mass balance relative to constituents of concern and hydraulic loading along with supporting data and calculations. The report shall describe the types of crops planted and dates of planting and harvest for each crop.

c. A narrative discussion of the analytical results for all groundwater locations monitored including spatial and temporal tends, with reference to summary data tables, graphs, and appended analytical reports (as applicable);

d. A comparison of monitoring data to the groundwater limitations and an explanation of any violation of those requirements;

~~b.~~

~~c.~~e. .For each violation of the Discharge Specifications, applicable Prohibitions, and Groundwater Limitations of this Order, the report shall describe in detail the nature of the violation, date(s) of occurrence, cause(s), mitigation or control measures taken to prevent or stop the violation, and additional operational or facility modifications that will be made to ensure that the violation does not occur in the following year.

~~d.~~f. A comprehensive evaluation of the effectiveness of the past year's wastewater application operation in terms of odor control, including consideration of application management practices (i.e. waste constituent and hydraulic loadings, application cycles, drying times, and cropping practices), and groundwater monitoring data.

~~e.~~g. A discussion of compliance and the corrective action taken, as well as any planned or proposed actions needed to bring the land application discharge, or groundwater limits, into full compliance with the requirements in this Order.

~~f.~~h. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program.

~~g.~~i. Based on this information, the Discharger shall develop and include a Nutrient Management Plan for the following season.

~~h.~~j. **Biosolids cumulative loading rates** shall be calculated for arsenic, cadmium, copper, lead, mercury, nickel, selenium, and zinc for each irrigation field using the monitoring results for the calendar year. The biosolids cumulative loading rates for the metals described above shall be reported in the annual report with supporting calculations.

~~i.~~k. ~~**Cumulative Adjusted Loading Rates** shall be calculated for arsenic, cadmium, copper, lead, mercury, nickel, selenium, and zinc using the equation described in Section IV.A.d of the Limitations and Discharge Requirements. The cumulative adjusted loading rates for the metals described above shall be reported in the annual report with supporting calculations.~~

~~j.~~l. **Cumulative nitrogen loading** applied to each irrigation field for the calendar year shall be calculated as a running total of monthly loadings reported monthly,

as described in Section VIII.B.6.f, above. The cumulative nitrogen loading shall be reported in the annual report with supporting calculations.

ATTACHMENT F – FACT SHEET

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List of Tables

ATTACHMENT F – FACT SHEET

As described in section II of this Order, this Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

~~This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for Dischargers in California.~~ Only those sections or subsections of this Order that are specifically identified as "not applicable" have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as "not applicable" are fully applicable to this Discharger.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	5B340101001
Discharger	City of Galt
Name of Facility	City of Galt Wastewater Treatment Plant and Reclamation Facility
Facility Address	10059 Twin Cities Road
	Galt, CA 95632
	Sacramento County
Facility Contact, Title and Phone	Mark A. Clarkson, Utilities Manager, (209) 366-7260
Authorized Person to Sign and Submit Reports	Mark A. Clarkson, Utilities Manager, (209) 366-7260
Mailing Address	495 Industrial Drive, Galt, CA 95632
Billing Address	495 Industrial Drive, Galt, CA 95632
Type of Facility	Publicly Owned Treatment Works (POTW)
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	N
Reclamation Requirements	Producer
Facility Permitted Flow	4.5 million gallons per day (MGD)
Facility Design Flow	Currently 3.0 MGD, upgrading Facility to 4.5 MGD
~~**Watershed**~~	~~Cosumnes River~~
~~**Receiving Water**~~	~~Laguna Creek~~--
~~**Receiving Water Type**~~	~~Inland surface water~~Underlying ~~Groundwater~~

A. The City of Galt (City) is the owner and operator of City of Galt Wastewater Treatment Plant and Reclamation Facility, a Domestic Wastewater Publicly-Owned Treatment Works.

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The City of Galt is hereinafter referred to as Discharger. For the purposes of this Order, references to the "discharger" or "permittee" in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

B. The Discharger filed a report of waste discharge (ROWD) and submitted an application for renewal of its WDRs and NPDES permit in March 2015. The application was deemed complete on 27 March 2015. In the March 2015 ROWD the Discharger requested separate permits to be issued by the Central Valley Water Board for the surface water and land discharges. Due to the complexities of the discharges to land for this Facility, separate permits have been issued for the surface water and land discharges. On XX December 2015, the Central Valley Water Board adopted Waste Discharge Requirements Order R5-2015-XXXX (NPDES Permit No. CA0079243), which is a renewed NPDES permit that regulates the wastewater treatment facility and the surface water discharge to Laguna Creek. This Order regulates the reuse of undisinfected secondary wastewater and the land application of biosolids on the land application area~~Reuse Area~~.

II. FACILITY DESCRIPTION

The Discharger owns and operates the City of Galt Wastewater Treatment Plant and Reclamation Facility (Facility), a Publicly-Owned Treatment Works servicing a population of approximately 24,000. The Facility is currently a 3.0 million gallon per day (mgd) average dry weather flow (ADWF) facility that can provide~~s~~ a tertiary level of treatment of municipal wastewater from the City of Galt.

A. Description of Wastewater and Biosolids Treatment or Controls

The major wastewater treatment facilities at the Facility have been in place since 1991. The facilities include coarse bar screening, grit removal, extended aeration in two oxidation ditches, solids settling in two secondary clarifiers, cloth media filtration, and ultraviolet (UV) disinfection. Recent major improvement projects have included the addition of filtration and UV light disinfection systems in 2011. The wastewater treatment process schematic and solids schematic can be found in Attachment C of this order.

The Discharger is in the process of constructing nitrification/denitrification improvements, which began in 2014 and will be completed in 2016. These improvements include construction of a third oxidation ditch and clarifier and improvements to all three oxidation ditches to allow for reliable simultaneous nitrification/denitrification. The immediate improvements also include minor upgrades to improve overall facility performance and reliability. One key improvement will be the installation of automated diversion facilities that will allow the Discharger to utilize the lined Auxiliary Basin for biosolids, dewatering filtrate, sludge lagoon decant, sludge dewatering bed decant, and influent flow equalization.

Solids are aerobically digested within the oxidation ditches, which are operated with a mean cell residence time (MCRT) of at least 25 days to stabilize the wastewater solids.

A portion of the stabilized sludge is removed ("wasted") from the process on a daily basis to maintain the desired mixed liquor suspended solids concentration in the oxidation ditches. This portion of the solids stream is called waste activated sludge (WAS) and is pumped into the two existing, high-density polyethylene (HDPE) membrane-lined storage lagoons.

Sludge is directed to one lagoon at a time. As the lagoons are filling, supernatant is decanted from the sludge and is returned to the oxidation ditches for further treatment. Once full, solids in the lagoons are blended using the mixers installed in each basin to create a uniformly mixed sludge that is sent to the Facility's dewatering beds. Supplemental mechanical dewatering equipment is also being installed as part of the improvement project to increase the dewatering capacity of the Facility.

The combination of (1) stabilization of solids within the oxidation ditch and the storage lagoons, and (2) the Discharger's disposal practices ~~qualifies the biosolids as~~is adequate to meet "Class B" biosolids standards in accordance with the USEPA's regulations as established in Code of Federal Regulations, Title 40 Section 503.

With the recent construction of the dewatering system, the Discharger has begun applying solids via surface spreading, followed by tilling, to incorporate the biosolids into the soil of the ~~Reuse Area~~ land application area fields, which are owned by the Discharger. The application typically occurs twice per year: once in the spring before planting, and once again in the fall after the crops are harvested but prior to planting of winter crops. The biosolids storage area, which provides approximately six months of biosolids storage at a solids production rate of 1,000 dry tons of solids per year, is used to accommodate the land application schedule.

A portion of the Discharger's effluent is used to irrigate the ~~Reuse Area~~land application area, which consists of approximately ~~172~~ 164 acres of agricultural fields located adjacent to the main Facility site. The Discharger's land application area is split into two fields: Field A and Field B. Field A is approximately 122 acres and Field B is approximately 50 acres. Field A is further divided into 14 different zones, ranging in size from 6.7 acres to 24.6 acres. ~~One of these zones (8.3 acres) will no longer be used as Reuse Area when the planned expansion of a nearby Police Firing Range is implemented. This change will bring the total Field A acreage to approximately 114 acres and total Reuse Area acreage to 164 acres.~~

Animal feed crops are grown in the land application area~~Reuse Area~~, and "Undisinfected Secondary Recycled Water" is typically used for irrigation. The Discharger leases the ~~Reuse Area~~ land application area to local farmers, and the farmers handle day-to-day operations of the land application area~~Reuse Area~~. The ~~Reuse Area~~ land application area is managed in accordance with the Discharger's *WWTP Land Management Plan* and *Title 22 Engineering Report*.

Undisinfected secondary effluent reused for irrigation is typically directed from the filter influent pump station to the Effluent Storage Reservoir where it is pumped to the land application area~~Reuse Area~~. The Discharger can also direct disinfected tertiary effluent to the Effluent Storage Reservoir for irrigation. The Effluent Storage Reservoir is the primary storage facility, and currently has approximately 220 acre-feet of available

storage capacity, with 2 feet of freeboard. Flows from the Effluent Storage Reservoir may also be directed to three onsite ponds for additional storage prior to being returned to the Effluent Storage Reservoir. The Discharger historically operated four storage ponds; however, Pond 2 has recently been repurposed for a solar facility. Because the Discharger has the ability to discharge any flows not needed for irrigation to surface water under a NPDES permit, the storage volume available in the Effluent Storage Reservoir is more than adequate to meet the needs of the land application area~~Reuse Area~~, so the storage ponds are rarely used. Furthermore, in the event of an emergency the Effluent Storage Reservoir and storage ponds may be used to store untreated or partially treated wastewater. Under these circumstances all wastewater within the ponds is returned to the Facility headworks for treatment.

During the irrigation season all drainage originating from the ~~Reuse Area~~ land application area is collected in earthen ditches on the low end of each field and is pumped to the effluent storage facilities (Ponds 1, 3, and 4, and the Effluent Storage Reservoir), where it is held until its eventual reuse or until it is returned to the headworks for treatment. Discharge Prohibition III.F ~~Section VI.C.3.d.viii~~ of this order prohibits the discharge of storm water runoff from the ~~Reuse Area~~ land application area to off-site land or surface water drainage course. However, at this time the Discharger is not able to comply with this prohibition due to the limited storage capacity available at the Facility. Winter season storm water is currently collected at the earthen ditches and conveyed to the reservoirs or is discharged to surface water. In order to comply with Discharge Prohibition III.F~~the prohibition in Section VI.c.3.d.viii~~ it will be necessary for the Discharger to construct additional facilities that will enable the Discharger to contain the appropriate volume of water that a large winter storm is capable of producing. Section VI.C.4b of t~~T~~his Order allows the Discharger until 1 ~~December 202~~January 2025~~0~~ to comply.

B. Discharge Point.

1. The Facility is located in Section 9, T5N, R6E, MDB&M, as shown in Attachment B, a part of this Order.

2. Undisinfected secondary treated wastewater, and at times tertiary treated wastewater, is used to irrigate the land application area~~Reuse Area~~, which consists of approximately 172 acres of City-owned agricultural fields located adjacent to the main Facility.

C. Planned Changes

Arsenic Removal Improvements.

Arsenic is naturally present in the City of Galt's groundwater based drinking water supply. The Discharger has historically employed multiple wells to supply drinking water to the residents and businesses of Galt and surrounding communities. In 2009, the Discharger employed well head filtration treatment at three of the City's well sites to reduce arsenic concentrations in the drinking water supply. The wellhead filtration systems remove arsenic from the potable water via media filtration, which requires

regular backwashing of the media to ensure optimal performance. Backwash from the well head filtration system is currently conveyed to the Facility through discharge to the sanitary sewer system. Upon arrival to the Facility, it was originally expected that the arsenic would be sufficiently removed with the installation of tertiary filtration. However, anaerobic conditions in the collection system cause the arsenic to resolubilize during transport, and the tertiary filtration cannot remove dissolved arsenic effectively.

The Discharger is planning to install a new deep well that will eliminate the need for wellhead filtration systems, except under peak flow/emergency conditions. In addition, the Discharger intends to evaluate hauling of the arsenic-laden solids contained in the backwash directly to the Facility which would reduce discharge of the solids to the sanitary sewer system. The Discharger has a compliance schedule implemented in TSO R5-2015-XXXX in order to evaluate and implement alternatives for reducing arsenic levels in the influent that results in long-term permit compliance.

The Discharger is exploring the following options for well backwash introduction into the Facility's treatment train:

a. Discharge backwash directly to Facility headworks or the Auxiliary Basin (for gradual/continuous discharge to headworks).

b. Mix backwash with the Facility's biosolids in a day mixing tank or the Sludge lagoon and dewater the combined solids. Combined solids would then be land applied in accordance with the Discharger's current biosolids land application practices as well as biosolids limitations and loading rates.

c. Discharge backwash to the Facility's Effluent Storage Reservoir, which is used to hold Facility effluent for subsequent agricultural irrigation on the land application area~~Reuse Area~~.

This Order allows the discharge of well head filter backwash to the above listed portions of the Facility's treatment train through the expiration of the compliance schedule for arsenic implemented in TSO R5-2015-XXXX.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the applicable plans, policies, and regulations identified in section II of the Limitations and Discharge Requirements (Findings). This section provides supplemental information, where appropriate, for the plans, policies, and regulations relevant to the discharge.

A. Legal Authority

See Limitations and Discharge Requirements - Findings, Section II.A.

B. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans**. The Central Valley Water Board adopted a *Water Quality Control Plan, Fourth Edition (Revised October 2011), for the Sacramento and San Joaquin River Basins* (Basin Plan) that designates beneficial uses,

establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan.

2. **Antidegradation Policy.** The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. As discussed in detail in the Fact Sheet (Attachment F, Section IV.B.1.) the discharge is consistent with the antidegradation provisions of State Water Board Resolution 68-16.

C. Other Plans, Polices and Regulations

Title 27, California Code of Regulations (CCR), section 20005 *et seq*. (hereafter Title 27). Discharges of wastewater to land, including but not limited to evaporation ponds or percolation ponds, are exempt from the requirements of Title 27, CCR, based on section 20090 *et seq.* The Facility contains storage facilities and agricultural land application area~~reuse fields~~ where a determination has been made by the Central Valley Water Board whether the facilities meet the exemptions from Title 27. The Central Valley Water Board's findings regarding Title 27 exemptions are discussed below.

1. **Effluent Storage Reservoir and ~~four~~ three Effluent Storage Ponds.** The storage reservoir is used to store at least secondary-level treated municipal wastewater for agricultural reuse. Treated wastewater may be directed from the reservoir to the ~~four~~ three storage ponds, and then redirected to the reservoir when needed for agricultural reuse~~.~~. On 7 February 2012, the State Water Resources Control Board (State Water Board) amended Order WQ 2009-0005, *In the Matter of Own Motion Review of City of Lodi Waste Discharge Requirements and Master Reclamation Permit, Order No. R5-2007-0113 (Lodi Order) to revise the application of the sewage exemption of Title 27 of the California Code of Regulations* (Title 27) to clarify that facilities used to store treated wastewater and recycled water prior to disposal or reuse qualify for the unconditional portion of the sewage exemption Section 20090(a), provided that the storage facilities: (1) are used to store treated municipal wastewater prior to ultimate disposal or reuse; (2) do not receive any other wastes other than on-site storm water flows if authorized by the State Water Board or the applicable Regional Water Board; and (3) are under the control of the municipal treatment plant. The Discharger's Effluent Storage Reservoir and three Effluent Storage Ponds meet all of these criteria, and thus, are unconditionally exempt from requirements of Title 27 CCR, pursuant to Title 22 CCR section 20090(a). ~~The treated wastewater does not need to be managed as hazardous waste. However, the reservoir and four ponds are unlined; therefore, the treated wastewater potentially percolates to the underlying groundwater. Groundwater analytical monitoring results obtained within the vicinity of the reservoir and four ponds (MW-4R, MW-1, and MW-2) indicate that constituents comply with the applicable water quality control plan. Thus, during this period, the storage reservoir and four storage~~

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~~ponds are exempt from requirements of Title 27 CCR, pursuant to Title 27 CCR section 20090(b).~~

Tertiary treated effluent that does not meet NPDES permit limits may be diverted into the storage reservoir and then either returned to the Facility ~~treatment system for further tertiary level~~headworks for re-~~-~~treatment before discharging to Laguna Creek, or land applied in accordance with requirements established in this Order.~~.~~ Since the reservoir is used as a necessary part of the Facility's wastewater treatment system, the reservoir during this period is exempt from the requirements of Title 27 CCR, pursuant to Title 27 CCR section 20090(a).

2. **Land Application.** During the agricultural season, the Discharger reuses treated municipal wastewater to irrigate approximately 172 acres of Discharger-owned agricultural fields. The reuse of treated wastewater on the agricultural fields is exempt from Title 27 pursuant to Section 20090(h).

3. **Biosolids**. Solids are aerobically digested within the oxidation ditches, which are operated with a mean cell residence time (MCRT) of at least 25 days to stabilize the wastewater solids. A portion of the stabilized sludge is removed ("wasted") from the process on a daily basis to maintain the desired mixed liquor suspended solids concentration in the oxidation ditches. This portion of the solids stream is called waste activated sludge (WAS) and is pumped into the two existing, high-density polyethylene (HDPE) membrane-lined storage lagoons.

   Sludge is directed to one lagoon at a time. As the lagoons are filling, supernatant is decanted from the sludge and is returned to the oxidation ditches for further treatment. Once full, solids in the lagoons are blended using the mixers installed in each basin to create a uniformly mixed sludge that is sent to the Facility's dewatering beds. Supplemental mechanical dewatering equipment is also being installed as part of the 2014/2015 improvements to increase the dewatering capacity of the Facility. The schematic of the solids treatment facilities is presented in Attachment C.

   With the recent construction of the dewatering system, the Discharger has begun applying solids via surface spreading, followed by tilling, to incorporate the biosolids into the soil of the Discharger-owned ~~Reuse Area~~ land application area fields. The application typically occurs twice per year: once in the spring before planting, and once again in the fall after the crops are harvested but prior to planting of winter crops. The biosolids storage area, which provides approximately six months of biosolids storage at a solids production rate of 1,000 dry tons of solids per year, is used to accommodate the land application schedule.

   The Discharger land applies dewatered Class B biosolids to selected agricultural fields between cropping cycles as a soil amendment. The use and disposal of biosolids comply with existing Federal and State laws and regulations, including permitting requirements and technical standards in Code of Federal Regulations (CFR) Part 503. The land application of biosolids on the Agricultural Fields as a soil

amendment is exempt from Title 27 CCR pursuant to Section 20090(f). Therefore, the Discharger's application of biosolids to the land application area is unconditionally exempt from requirements of Title 27 CCR, pursuant to Title 22 CCR section 20090(f).

Groundwater is generally encountered at approximately 57 to 80 feet below the ground surface. The Facility's groundwater monitoring system consists of 8 monitoring wells, including 2 background wells. Based on groundwater monitoring results from March 2005 through June 2010, constituent concentrations in the compliance monitoring wells comply with the Basin Plan water quality objectives (see section V.A.1 of this Fact Sheet for more information). Therefore, the groundwater quality associated with the Facility's disposal of sludge in compliance with the Basin Plan, and therefore, meets the preconditions to qualify for exemption from Title 27.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The Central Valley Water Board's Basin Plan, page IV-17.00, contains an implementation policy ("Policy for Application of Water Quality Objectives" that specifies that the Central Valley Water Board "*will, on a case-by-case basis, adopt numerical limitations in orders which will implement the narrative objectives*." With respect to narrative objectives, the Central Valley Water Board must establish effluent limitations using one or more of three specified sources, including (1) EPA's published water quality criteria, (2) a proposed state criterion (*i.e.*, water quality objective) or an explicit state policy interpreting its narrative water quality criteria (*i.e.*, the Central Valley Water Board's "Policy for Application of Water Quality Objectives"). The Basin Plan contains a narrative objective requiring that: "*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life*" (narrative toxicity objective). The Basin Plan requires the application of the most stringent objective necessary to ensure that surface water and groundwater do not contain chemical constituents, discoloration, toxic substances, radionuclides, or taste and odor producing substances that adversely affect beneficial uses. The Basin Plan states that material and relevant information, including numeric criteria, and recommendations from other agencies and scientific literature will be utilized in evaluating compliance with the narrative toxicity objective. The Basin Plan also limits chemical constituents in concentrations that adversely affect surface water beneficial uses. For waters designated as municipal, the Basin Plan specifies that, at a minimum, waters shall not contain concentrations of constituents that exceed Maximum Contaminant Levels (MCL) of CCR Title 22. The Basin Plan further states that, to protect all beneficial uses, the Central Valley Water Board may apply limits more stringent than MCLs.

A. Discharge Prohibitions

1. **Prohibition III.A (No discharge or application of waste other than that described in this Order).** This prohibition is based on CWC Section 13260 that requires filing of a report of waste discharge (ROWD) before discharges can occur. The Discharger submitted a ROWD for the discharges described in this Order; therefore, discharges not described in this Order are prohibited.

2. **Prohibition III.D (No bypasses or overflow of untreated wastewater, except under the conditions at CFR Part 122.41(m)(4)).** This Order prohibits bypass from any portion of the treatment facility. Federal Regulations, 40 CFR 122.41 (m), define "bypass" as the intentional diversion of waste streams from any portion of a treatment facility. This section of the Federal Regulations, 40 CFR 122.41 (m)(4), prohibits bypass unless it is unavoidable to prevent loss of life, personal injury, or severe property damage. In considering the Central Valley Water Board's prohibition of bypasses, the State Water Board adopted a precedential decision, Order No. WQO 2002-0015, which cites the Federal Regulations, 40 CFR 122.41(m), as allowing bypass only for essential maintenance to assure efficient operation.

3. **Prohibition III.E (No controllable condition shall create a nuisance).** This prohibition is based on CWC Section 13050 that requires water quality objectives established for the prevention of nuisance within a specific area. The Basin Plan prohibits conditions that create a nuisance.

B. Final Effluent Limitations

1. **Satisfaction of Antidegradation Requirements.** The Discharger utilizes Effluent Storage Ponds, reuses municipal and industrial wastewater for irrigation of the ~~Reuse Area~~ land application area and applies dewatered Class B biosolids as a soil amendment to the land application area~~Reuse Area~~. This Order requires the Discharger to limit the hydraulic and ~~,~~ total nitrogen ~~, and BOD~~ loadings to the extent of the plant uptake to assure that pollution or nuisance will not occur. This Order also requires the Discharger to comply with groundwater limits for certain pollutants of concern (see Section V.A. Groundwater Limitations) for protection of the beneficial uses of the groundwater and to ensure that degradation does not occur.

   The Antidegradation Policy (State Water Board Resolution 68-16) requires that a discharge to a high quality water will not result in degradation unless the waste discharge requirements result in the implementation of best practicable treatment or control (BPTC) of the discharge to assure a pollution or nuisance will not occur and the degradation is to the maximum benefit of the people of the state. The Discharger's land application activities are a threat to groundwater quality. Regular groundwater monitoring indicates that monitoring wells occasionally exceeded background and/or Water Quality Goals for arsenic, electrical conductivity, nitrate, and total dissolved solids. Over the last several years, the Discharger has made improvements to its facility and the composition of the irrigation water and pond water has improved. Further, the Discharger now dewaters its biosolids for application to the agricultural fields. Compliance with this Order will result in the implementation of BPTC and compliance with the Antidegradation Policy.

C. Land Discharge Specifications

1. The Land Discharge Specifications are necessary to protect the beneficial uses of the groundwater.

2. **Hydraulic, and Nitrogen Loading.** Because waste applications must be balanced to provide adequate plant nutrients and water while minimizing nuisance potential and percolation of waste constituents to the water table, this Order requires hydraulic and Total Nitrogen loadings at reasonable agronomic rates.

3. **Biosolids Limitations and Loading Rates.** Biosolids may contain pathogens and heavy metals, and are a significant source of nitrogen and decomposable organic matter. Discharge of pathogens, metals, and organic matter to surface waters can affect water quality. Additionally, biosolids land application can create odor and insect nuisances. Therefore, it is appropriate to impose biosolids application requirements that ensure timely incorporation into the soil and to control field runoff.

   Most of the nitrogen present in biosolids is in organic form, which must be mineralized to ammonia and then nitrate, which is the form of nitrogen that plants utilize. Organic nitrogen from biosolids typically does not completely mineralize during the first year after it is applied, and some may remain present in the soil as humus indefinitely. Therefore, it is common for land applications of biosolids to exceed the total nitrogen requirements of the crop in order to ensure that sufficient plant available nitrogen (PAN) is applied each year. In order to prevent nitrogen over application, biosolids application rates should be based on consideration of the nitrogen content of the biosolids to be applied, nitrogen mineralization from previous years' biosolids applications, and all supplemental nutrient sources (including livestock waste). Appendix E of the US Environmental Protection Agency's *Guide for [Biosolids] Land Appliers* (EPA/831-B-93-002b) describes appropriate procedures for determining PAN for fresh biosolids based on the total nitrogen content and residual PAN from previous years' applications. It is therefore also appropriate to require that the Dischargers calculate PAN using the procedure, volatilization factors, and mineralization rates described that document.

   The United States Environmental Protection Agency (USEPA) has promulgated biosolids reuse regulations in 40 CFR 503 that establish criteria for water quality protection, limits for heavy metals loading rates, and stabilization and disinfection criteria. The Central Valley Water Board is using 40 CFR 503 as a guideline for developing this Order. However, the Central Valley Water Board is not the implementing authority for 40 CFR 503, and the Dischargers and generators of biosolids that are land applied pursuant to this Order may have separate and/or additional compliance, reporting, and permitting responsibilities to the USEPA that are not addressed by this Order.

D. Reclamation Specifications

Reclaimed water is required to meet the criteria contained in Title 22, Division 4, CCR (section 60301, et seq.). This Order retains the reclamation requirements contained in the previous Order to reduce public health concerns and comply with the requirements of Title 22 California Code of Regulations.

Treated wastewater discharged for reclamation purposes not specified in this Order must be approved by the Executive Officer, or regulated under separate waste discharge requirements, and must meet the requirements of CCR, Title 22.

Section 60323(a) of Title 22 states that no person shall produce or supply recycled water for direct reuse from a proposed reclamation plant unless an engineering report is submitted for review and approval by Department of Public Health (DPH). A Title 22 Engineering Report dated 12 January 2005 was submitted to DPH. DPH reviewed the report and did not provide any comments[JDM1].

E. Land Application Area Specifications.

1. Order R5-2015-XXXX allows the discharge of tertiary-treated effluent to surface water year-round. This specification is to ensure that the Discharger optimizes land application before discharging to surface water to ensure compliance with the Basin Plan's Wastewater Reuse Policy.

2. The Land Application Specifications include Title 22 requirements to ensure protection of public health, such as signage requirements, marking of reclaimed water equipment, pumps, piping, valves, and outlets to differentiate them from potable facilities, and setback requirements. The setback requirements in this Order are included in accordance with Title 22 or based on engineering judgment to protect public health, assure nuisance conditions are not created, and to protect surface waters. The following setback requirements are included in this Order:

Setback Definition[1]	Minimum Irrigation Setback (feet)	Rationale for Setback Requirement
Edge of land application area to property boundary	25	These setback requirements are necessary to protect public health and assure nuisance conditions are not created.
Edge of land application area to a public road right of way	30	
Edge of land application area to an irrigation well	100	
Edge of land application area to a domestic well	150	Title 22, CCR § 60310(b)
Edge of land application area to a manmade or natural surface water drainage course [2]	50	Setback requirement necessary to protect surface waters.
Edge of land application area to residence	100	Title 22, CCR § 60310(f)
Edge of land application area using spray	100	Title 22, CCR § 60310(f)

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irrigation to public park, playground, school yard, or similar place of potential public exposure		

[1] As defined by the wetted area produced during irrigation.
[2] Excluding ditches used exclusively for tailwater return.

3. The Land Application Specifications also require that the application of wastewater is within land application area boundaries, is applied evenly throughout the application areas, and is not applied when soils are saturated. The land application areas must also be maintained to prevent breeding of mosquitos. These specifications are necessary to protect groundwater and to assure nuisance conditions are not created.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

Basin Plan water quality objectives to protect the beneficial uses of surface water and groundwater include numeric objectives and narrative objectives, including objectives for chemical constituents, toxicity, and tastes and odors. The toxicity objective requires that surface water and groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants, animals, or aquatic life. The chemical constituent objective requires that surface water and groundwater shall not contain chemical constituents in concentrations that adversely affect any beneficial use or that exceed the maximum contaminant levels (MCLs) in Title 22, CCR. The tastes and odors objective states that surface water and groundwater shall not contain taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses. The Basin Plan requires the application of the most stringent objective necessary to ensure that surface water and groundwater do not contain chemical constituents, toxic substances, radionuclides, or taste and odor producing substances in concentrations that adversely affect domestic drinking water supply, agricultural supply, or any other beneficial use.

A. Groundwater

1. **Basin Plan, Beneficial Uses, and Regulatory Conditions.** The beneficial uses of the underlying groundwater are municipal and domestic supply, industrial service supply, industrial process supply, and agricultural supply.

   Basin Plan water quality objectives include narrative objectives for chemical constituents, tastes and odors, and toxicity of groundwater. The toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants, animals, or aquatic life. The chemical constituent objective states groundwater shall not contain chemical constituents in concentrations that adversely affect any beneficial use. The tastes and odors objective prohibits taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses. The Basin Plan also establishes numerical water quality objectives for chemical constituents and radioactivity in

groundwaters designated as municipal supply. These include, at a minimum, compliance with MCLs in Title 22 of the CCR. The bacteria objective prohibits total coliform organisms at or above 2.2 MPN/100 mL.

The Basin Plan requires the application of the most stringent objective necessary to ensure that waters do not contain chemical constituents, toxic substances, radionuclides, taste- or odor-producing substances, or bacteria in concentrations that adversely affect municipal or domestic supply, agricultural supply, industrial supply or some other beneficial use.

Ground water limitations are required to protect the beneficial uses of the underlying groundwater.

2. **Discharge Locations.** The Discharger utilizes one lined auxiliary storage basin located within the primary treatment facility, two polyethylene membrane-lined earthen sludge lagoons located within the secondary treatment facility, an unlined effluent storage reservoir, and four three unlined effluent storage ponds. Treated wastewater is also reclaimed on the Discharger's reclamation land application area. Domestic wastewater contains constituents of concern such as TDS, specific conductivity (EC), pathogens, nitrates, organics, metals, and oxygen demanding substances (BOD).

3. **Groundwater Quality.**

   a. **Background Conditions.** The Facility is located south of Laguna Creek in the southern portion of Sacramento County. Land use surrounding the Facility is predominantly agricultural. *"Subsurface statigraphicstratigraphic formation information for the WWTP was limited to driller's logs for supply wells. One of the supply wells (DWR number 05N06E09) is located at the WWTP, approximately 1,000 feet northeast of the control building. The driller's logs generally show a sequence of brownish gravels, sands and clays from near land surface to depths ranging from approximately 125 to 155 feet below land surface (bls). Blue, green, gray or black gravels, sands and clays were encountered below this depth range from 250 feet bls, the maximum depths to which the water supply wells were typically drilled."* (West Yost & Associates January 2003)

   "Regional groundwater flow is generally southwestward. Extensive groundwater production has resulted in two groundwater cones of depression to the north-northwest and east of the WWTP. These cones of depression very likely influence groundwater flow directions at the WWTP. The easterly cone of depression may result in easterly groundwater flow beneath the WWTP. Groundwater elevations measured in produudction wells- in the vicinity of the WWTP typically fluctuate more than 10 feet annually in response to seasonal variations in groundwater production and precipitation. The lowest groorundwater elevations occur near the end of the irrigation season (approximately April through October), and the highest elevations

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occur near the end of the non-irrigation season (approximately November through March). Virtually all the precipitation occurs during the non-irrigation season." (West Yost & Associates 2008)

"Groundwater recharge from irrigation, Laguna Creek and its tributaries, and the WWTP effluent ponds may influence depth to groundwater and groundwater gradients beneath the WWTP. Based on the Sacramento County Department of Water Resources groundwater elevation contour maps…the depth of groundwater in the vicinity of the WWTP, as measured in the supply wells, ranged from approximately 75 to 85 feet below level of surface." (West Yost & Associates January 2003)

By definition background groundwater conditions are those pollutants that are present in the groundwater that are not attributable to the Facility's activities. Rather, these conditions are outside the influence of the Facility, and may be caused by local geophysical, hydrological, and meteorological processes, and wildlife and outside anthropogenic activities. The Discharger installed two background monitoring wells, ~~-~~MW-7, and MW-8. ~~-~~ MW-7 and MW-8 were installed approximately 1.5 miles north on the frontage road west of Highway 99, and 3.0 miles northeast of the Facility, on Arno Road, respectively, in June 2004. These two background monitoring wells are located north of Laguna Creek.

b. **Downgradient Conditions.** Three monitoring wells (MW-1, MW-3, and MW-4) were installed within the Facility property in November 2002. Two more wells (MW-2 and MW-5) were installed in June 2003. In October 2005, monitoring well MW-4 was destroyed and well MW-4R was installed nearby as a replacement. Groundwater flows towards the south and southeast regardless of season.

Monitoring well MW-1 is located near the southwestern corner of the auxiliary storage basin. Monitoring well MW-2 is located near the southwestern corner of Sludge Stabilization Pond #1. Monitoring well MW-3 is installed along the roadway bounding the west edge of the existing irrigation area No. 5. Monitoring well MW-4R is located near the southwestern edge of Field B. ~~the current biosolids application area in section area #19.~~ Monitoring well MW-5 is east of the Facility adjacent to Highway 99 and south of Laguna Creek, and was installed in June 2003. Monitoring well MW-6, which was located southwest of the WWTP in the west central portion of the RCB site, has been decommissioned in accordance with of the expiration of the Discharger's contract with the RCB and the cessation of recycled water use from the Facility on RCB land..

Although some monitored constituents in groundwater near the Facility exceed water quality objectives (e.g., TDS, nitrate, and arsenic) the results are not statistically greater than background. Tables F-2 through F-4 below

summarize the groundwater monitoring data from the period of Fourth Quarter 2002 through Fourth Quarter 2014 for TDS, nitrate, and arsenic.

Table F-2. Summary of TDS in Groundwater

Parameter	Water Quality Objective	Wells	Background		MW-1	MW-2	MW-3	MW-4R	MW-5
			MW-7	MW-8					
TDS (mg/L)	450[1]	No. of Samples	43	41	47	41	47	49	45
		Mean	510	426	611	530	414	444	337
		Standard Deviation	58	37.4	74	71.4	44.6	51.4	26.2
		Maximum	580	520	920	680	480	550	400
		95th%	726	480	--	--	--	--	
		99th%	861	481	--	--	--	--	

[1] Agricultural water quality goals based on *Water Quality for Agriculture*, Food and Agriculture Organization of the United Nations—Irrigation and Drainage Paper No. 29, Rev. 1 (R.S. Ayers and D.W. Westcot, Rome, 1985). Agricultural water quality goals listed provide no restrictions on crop type or irrigation methods for maximum crop yield. Higher concentrations may require special irrigation methods to maintain crop yields or may restrict types of crops grown.

Table F-3. Summary of Nitrate in Groundwater

Parameter	Water Quality Objective	Wells	Background		MW-1	MW-2	MW-3	MW-4R	MW-5
			MW-7	MW-8					
Nitrate as N (mg/L)	10	No. of Samples	43	41	47	42	46	49	45
		Mean	7.0	6.6	4.3	10.2	7.3	1.1	4.3
		Standard Deviation	1.7	1.4	1.9	4.2	1.9	0.8	0.7
		Maximum	11	8.5	9	21	15	3.5	6.7
		95th%	8	7	--	--	--	--	--
		99th%	9	7	--	--	--	--	--

[1] USEPA Drinking Water Standards (Primary Maximum Contaminant Level)

Table F-4. Summary of Arsenic in Groundwater

Parameter	Water Quality Objective	Wells	Background		MW-1	MW-2	MW-3	MW-4R	MW-5
			MW-7	MW-8					
Arsenic (µg/L)	10	No. of Samples	43	41	47	41	47	49	44
		Mean	5.2	3.6	6.5	5.6	6.1	8.5	4.5
		Standard Deviation	5.6	2.8	5.5	1.2	1.8	8.1	1.5
		Maximum	29	17	30	11	16	50	20
		95th%	15.6	5.9	11	5.8	6.9	9.1	7.7
		99th%	19.2	6.1	13	7.0	7.5	9.7	8.6

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4. **Groundwater Limits.** In allowing a discharge, the Central Valley Water Board must comply with CWC Section 13263 in setting appropriate conditions. The Central Valley Water Board is required, relative to the groundwater that may be affected by the discharge, to implement the Basin Plan and consider the beneficial uses to be protected along with the water quality objectives essential for that purpose. The Central Valley Water Board need not authorize the full utilization of the waste assimilation capacity of the groundwater (CWC 13263(b)) and must consider other waste discharges and factors that affect that capacity.

   Since arsenic is naturally high in the City of Galt's water supply, the average concentrations of arsenic in the Facility's influent is 13 µg/L and in the effluent is 12.1 µg/L, which is above the water quality objective of 10 µg/L. The City of Galt

uses filters to reduce arsenic in the drinking water supply to achieve compliance with the federal Arsenic Rule. The water treatment filters are periodically backwashed to remove accumulated solids. The backwash water is discharged to the sanitary sewer system and ends up at the Facility. A numeric groundwater limit of 10 µg/L for arsenic, based on USEPA's primary MCL, is included in this Order to protect the beneficial uses of the groundwater. This Order also includes numeric groundwater limitations for TDS, nitrate, ~~nitrite,~~ total coliform, pH to ensure compliance with the Basin Plan and protect the beneficial uses of the groundwater. This Order contains a reopener to add or modify groundwater limitations as necessary.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

~~Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results.~~ Water Code section~~s~~ 13267 ~~and 13383~~ authorizes the Central Valley Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP), Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

A. Influent Monitoring – Not Applicable

B. Effluent Monitoring

1. Effluent monitoring is necessary to assess compliance with effluent limitations, assess the effectiveness of the treatment process, and to assess the impacts of the discharge.

C. Receiving Water Monitoring

1. Groundwater

a. Section 13267 of the California Water Code states, in part, *"(a) A Regional Water Board, in establishing…waste discharge requirements… may investigate the quality of any waters of the state within its region*" and *"(b) (1) In conducting an investigation…, the Regional Water Board may require that any person who… discharges… waste…that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the Regional Water Board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports*." The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the Central Valley Water Board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person

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to provide the reports. The Monitoring and Reporting Program (Attachment E) is issued pursuant to California Water Code Section 13267. The groundwater monitoring and reporting program required by this Order and the Monitoring and Reporting Program are necessary to assure compliance with these waste discharge requirements. The Discharger is responsible for the discharges of waste at the facility subject to this Order.

b. The groundwater monitoring and reporting program required by this Order and the Monitoring and Reporting Program are necessary to assure compliance with the waste discharge requirements and to fully characterize:

- All waste constituents to be discharged;
- The background quality of the uppermost layer of the uppermost aquifer;
- The background quality of other waters that may be affected;
- The underlying hydrogeologic conditions;
- Waste treatment and control measures;
- How treatment and control measures are justified as best practicable treatment or control;
- The extent the discharge will impact the quality of each aquifer; and
- The expected degree of degradation below water quality objectives.

c. Monitoring of the groundwater must be conducted to determine if the discharge has caused an increase in constituent concentrations, when compared to background. The monitoring must, at a minimum, require a complete assessment of groundwater impacts including the vertical and lateral extent of degradation, an assessment of all wastewater-related constituents which may have migrated to groundwater, an analysis of whether additional or different methods of treatment or control of the discharge are necessary to provide best practicable treatment or control to comply with Resolution No. 68-16. Economic analysis is only one of many factors considered in determining best practicable treatment or control. If monitoring indicates that the discharge has incrementally increased constituent concentrations in groundwater above background, this permit may be reopened and modified

d. This Order requires the Discharger to continue groundwater monitoring and includes a regular schedule of groundwater monitoring in the attached Monitoring and Reporting Program. The groundwater monitoring reports are necessary to evaluate impacts to waters of the State to assure protection of beneficial uses and compliance with Central Valley Board plans and policies, including Resolution 68-16. Evidence in the record includes effluent monitoring data that indicates the presence of constituents that may degrade groundwater. For additional information see previous Section V.B of this Fact Sheet.

E. Other Monitoring Requirements

1. **Land Discharge Monitoring.** Disposal pond monitoring is required to evaluate compliance with Land Discharge Specifications contained in Section VI.A.

2. **Reclamation Monitoring.** Reclaimed wastewater monitoring is required to evaluate compliance with Reclamation Discharge Specifications contained in Section VII.A.

3. **Biosolids Monitoring.** Biosolids monitoring is required to ensure compliance with the biosolids disposal requirements (Special Provisions VI.C.3.b.v.). Biosolids disposal requirements are imposed pursuant to 40 CFR Part 503 to protect public health and prevent groundwater degradation.

VII. RATIONALE FOR PROVISIONS

A. Special Provisions

1. Construction, Operation, and Maintenance Specifications

a. **Treatment Pond Operating Requirements.** Section 13050 of California Water Code (CWC) prohibits wastewater, either discharged or impounded, to create a nuisance. Anaerobic conditions (lacking oxygen) within ponds tend to produce aesthetically undesirable odors, and impounded waters improperly managed can breed mosquitoes. Furthermore, as previously disclosed, all ponds (except the auxiliary storage basin and sludge lagoons) at the Facility are unlined, so impounded wastewater may percolate to the underlying groundwater. Low pH values cause metals to dissolve, allowing them to percolate into the groundwater. Many metals are priority toxic pollutants, and when transported into groundwater, could elevate concentration levels and violate the Basin Plan's groundwater toxicity objective. Therefore, this provision is necessary to comply with CWC Section 13050.

2. Special Provisions for Municipal Facilities (POTWs Only)

a-c Sludge/Biosolids Specifications.

The sludge/biosolids provisions are required to ensure compliance with State disposal requirements (Title 27, CCR, Division 2, Subdivision 1, section 20005, et seq) and USEPA sludge/biosolids use and disposal requirements at 40 CFR Part 503. Site specific requirements are included to protect beneficial uses (e.g. Biosolids shall not be applied to soil with a pH of less than 6.5 to prevent metals from mobilizing to the underlying groundwater).

~~**d. Agricultural Reuse Area Specifications.**~~

~~i. Order R5-2015-XXXX allows the discharge of tertiary-treated effluent to surface water year-round. This specification is to ensure that the Discharger optimizes land application before discharging to surface water to ensure compliance with the Basin Plan's Wastewater Reuse Policy.~~

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~~ii. **Storm Water Runoff Prohibition (Section VI.c.3.d.viii).** Effective 1 December 2020, discharge of storm water runoff from the Reuse Area to off-site land or surface water drainage courses is prohibited. Winter season storm water is currently collected at the earthen ditches and conveyed to the reservoirs or is discharged to surface water. In order to comply with the prohibition in Section VI.c.3.d.viii it will be necessary for the Discharger to construct additional facilities that will enable the Discharger to contain the appropriate volume of water that a large winter storm is capable of producing. Therefore, this Order allows the Discharger until 1 December 2020 to comply with Section VI.C.3.d.viii. In order to minimize impacts to surface water this Order prohibits the application of wastewater on the Reuse Area during periods of rain or when the soil is saturated. Furthermore, this Order requires a minimum period of 30-days from the last application of wastewater and/or biosolids on the Reuse Area prior to release of storm water to surface water drainage courses.~~

3. Other Special Provisions

a. **Ownership Change.** To maintain the accountability of the operation of the Facility, the Discharger is required to notify the succeeding owner or operator of the existence of this Order by letter if, and when, there is any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger.

b. **Storm Water Runoff of ~~Reuse Area~~Land Application Area.** This Order includes Discharge Prohibition III.F that prohibits the indirect discharge of storm water runoff containing waste pollutants from the ~~Reuse Area~~ land application area to off-site land or surface water drainage courses. Because undisinfected secondary effluent is applied to the land application area~~Reuse Areas~~, this prohibits any discharge of storm water from the land application area~~Reuse Areas~~. Winter season storm water is currently collected at the earthen ditches and conveyed to the reservoirs or is discharged to surface water. In order to comply with Discharge Prohibition III.F it will be necessary for the Discharger to construct additional storage facilities that will enable the Facility to contain the appropriate volume of water that a large winter storm is capable of producing. The Discharger has requested to first conduct a pathogen risk study to determine if there may be best management practices that could be implemented to ensure the indirect discharge of storm water run-off from the ~~Reuse Area~~ land application area does not contain waste pollutants.

This Order allows the Discharger until **1 January 2025** to comply with Discharge Prohibition III.F. The Discharger shall conduct a pathogen risk study and implement best management practices to ensure compliance with Discharge Prohibition III.F. In the interim, this Order requires a discharge specification to minimize impacts to surface water from storm water run-off from the ~~Reuse Area~~

land application area as follows:

To minimize impacts to surface water there shall be a minimum of 30-days since the last application of wastewater and/or biosolids on the ~~Reuse Area~~ land application area prior to the discharge of storm water runoff from the ~~Reuse Area~~ land application area to off-site land or surface water drainage courses.

VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) is considering the issuance of waste discharge requirements (WDRs). ~~that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for City of Galt Wastewater Treatment Plant.~~ As a step in the WDR adoption process, the Central Valley Water Board staff has developed tentative WDRs. The Central Valley Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Central Valley Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through the Central Valley Water Board's website and publication in the Galt Herald on 30 September 2015.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments must be submitted either in person or by mail to the Executive Office at the Central Valley Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the Central Valley Water Board, written comments should be received at the Central Valley Water Board office by 5:00 p.m. on 19 October 2015.

C. Public Hearing

The Central Valley Water Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: 10/11 December 2015
Time: 8:30 am
Location: Regional Water Quality Control Board, Central Valley Region
11020 Sun Center Dr., Suite #200
Rancho Cordova, CA 95670

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Interested persons are invited to attend. At the public hearing, the Central Valley Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our Web address is http://www.waterboards.ca.gov/rwqcb5/ where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Central Valley Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Central Valley Water Board's action to the following address:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

E. Information and Copying

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Central Valley Water Board by calling 916-464-3291.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs ~~and NPDES permit~~ should contact the Central Valley Water Board, reference this facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Tyson Pelkofer at 916-464-4853 or Tyson.Pelkofer@waterboards.ca.gov.